Lecture
ON
ATROPHY OF THE STOMACH.

BY SAMUEL FENWICK, M.D., F.R.C.P.,
PHYSICIAN TO, AND LECTURER ON MEDICINE AT, THE LONDON HOSPITAL.

(*Concluded from page 61.*)

3. *Partial atrophy of the stomach, or atrophy combined with structural changes in other parts of the organ.*—We have hitherto considered atrophy as affecting all portions of the glandular structure of the stomach, and producing very marked anæmia; we have now to turn our attention to cases in which it occurs in a more partial manner, and in which the effects are much less prominent. The pyloric is more liable to this change than the other regions, and most of the descriptions of the morbid appearances given by authors have been drawn from investigations into the structure of this part. I think, however, that the anatomical alterations so often met with near the pylorus are analogous to the senile atrophy so common in the other glandular structures of the body. Of five cases where death had occurred from other diseases than cancer, in persons below twenty-five years of age, the pyloric region formed 11·9 per cent. of the weight of the whole mucous membrane; whilst of fourteen above that time of life it amounted to 16·4 per cent. The activity of the pyloric region is normally much less than that of the other parts; for in nineteen cases I found that an infusion made from it possessed little more than one-third of the digestive power of that taken from the middle or cardiac portions. Of course you will at once see an objection to these figures—namely, that as the different regions are not separated by an exact boundary line, they can afford only an approximation to the truth. But as they were taken as carefully as possible, and with no preconceived theory to support, I believe the conclusions drawn from them to be correct. This increase in the extent of the pyloric region after the growth of the body is complete—which, according to my observation, continues to increase as age advances, and is, moreover, associated with atrophy of the secretory tubes—seems to afford an illustration of what I have already advanced: namely, that the development of cancer is associated with degeneration of the tissues. Primary cancer is most commonly met with in the breast, uterus, and pyloric end of the stomach. Now you are aware that the two former organs lose their functional powers sooner than the other glandular structures of the body, and here we see the same commonly occurs at the pylorus at an early age.

But a partial atrophy of the glandular structure of the stomach occurs as an accompaniment of an inflammatory condition of the connective tissue of the organ; and the symptoms of such cases are, of course, greatly modified, as you will see in the following.

CASE 5.—A man, thirty-nine years of age, was admitted into the hospital under my care in Sept., 1873. He had enjoyed good health until thirteen years before, when he had contracted chancres, which were followed by severe secondary symptoms that had laid him up for eight or nine months. In 1871 he had severe pains in his lower extremities, and in 1872 had first observed a lump in the right axilla. For six months he had suffered pain after food and frequent vomiting of a sour, burning liquid, but had never had hæmatemesis. On admission, the lump in the axilla proved to be an enlarged gland, the size of a hen's egg, the vomiting was frequent, and he complained much of weakness. There was a systolic murmur at the third rib; on a line with the umbilicus and to the right of it there was a tender part, which gave the sensation as if there was a deeply-seated thickening. He gradually became weaker, the vomiting increased, the glands above the clavicle became enlarged, and he eventually sank very slowly from exhaustion. On post-mortem examination, the only appearance of disease was in the stomach. The pyloric region was generally thickened, hard, and leathery, but there was no tumour. The pyloric orifice was of normal size, and the stomach not dilated. Microscopically, the mucous membrane presented everywhere atrophy of the tubes, but the morbid changes were not to the same extent as in the cases of "idiopathic anæmia" before described. The enlarged glands showed no appearances of cancer.

Now, I do not propose on the present occasion to take up your time on the question whether the thickening of the stomach was of syphilitic origin. The point of interest is, that the man should sink from exhaustion when the pylorus was not narrowed and the stomach not dilated. We can only attribute his death to the coexisting atrophy of the peptic glands and the consequent imperfection of his digestive powers. You will find cases similar to this reported by various authors, in which no disease could be found after death, excepting an inconsiderable thickening of the connective tissue of the stomach. They are generally quoted as showing how slight an amount of disease occurring in an organ necessary for the continuance of life will suffice to produce death. The acidity and vomiting where, as in this case, there is no stricture of the pylorus, seem to arise from the long retention of the food in the stomach, caused by coexisting degeneration of the muscular coat.

Atrophy of small isolated tracts of the mucous membrane of the stomach is often associated with, or results from, chronic inflammation of the connective tissue between and below the gastric tubes. One very common cause is disease of the heart. In the earlier stages the tubes are firmly united together, and the whole mucous membrane is increased in bulk; but at a later period it becomes tough and leathery, and atrophy of the glandular structures is apt to ensue. This is chiefly at the pyloric end, for at this part the effects of long-standing venous congestion are most strikingly exhibited. I need not remind you that a similar state of atrophy of the kidneys, liver, and other organs is apt to occur whenever the venous circulation is for a long time obstructed. But if venous congestion is capable of inducing atrophy, you would expect to find this condition of the stomach in cirrhosis of the liver. Such is the case, and as the earlier symptoms of cirrhosis are usually those of chronic gastritis, so you rarely meet with the stomach of one who has died of that complaint in a perfectly healthy state. Besides the cases in which there has been long-standing venous congestion, most of the instances of partial atrophy of the stomach occur in persons affected with chronic Bright's disease or with phthisis. The symptoms arising from this class of cases of atrophy are much less striking than in idiopathic anæmia or cancer. This is due to the circumstance that the extent of the glandular structure involved is so much less than in those formerly described, and also because the anæmia produced is apt to be ascribed to the more evident coexisting visceral disorders.

Diagnosis.—It is unnecessary to say much respecting the diagnosis of the partial forms of gastric atrophy. Their existence must be determined by reference to the other diseases from which the patient is suffering—diseased heart, cirrhosis, granular kidney, or phthisis—and to the history of the symptoms of gastritis. But it is different with respect to "idiopathic anæmia." You will often find it almost impossible to come to a correct conclusion until you have watched the patient for some time. It will assist you in your diagnosis to bear in mind that the disease occurs only in middle-aged or in elderly persons, that the male is more apt to be affected than the opposite sex, that the patients, although strikingly anæmic, are commonly stout, often unusually so, that palpitation and breathlessness on exertion are prominent symptoms, that the appetite is very bad, especially as regards all kinds of animal food, and that where the female is the subject of the malady there is usually a history of scirrhus of the breast. But you must also be careful to exclude all causes likely to produce anæmia, such as chronic diarrhœa, dysentery, albuminuria, leucorrhœa, &c. Now, in practice, you meet with difficulties you would not, perhaps, have expected. Hæmorrhage, for example, may be going on from some organ, and the patient may be either unaware of it, or may attempt to conceal the fact. A lady, between thirty and forty years of age, who had been looking ill for some time, but had made no definite complaint, became exceedingly weak and feeble. When I saw her she was strikingly anæmic, breathless on the least

exertion, but had no pain or vomiting, nor was she aware of any discharge of blood. The urine was not albuminous. Taking into consideration that the anæmia had come on rather suddenly, I surmised that she had an ulcer of the stomach or duodenum, and an attack of hæmatemesis shortly afterwards proved the correctness of the suspicion. You know that ulcerations of the upper part of the digestive tract are ordinarily associated with pain and vomiting, but a painless ulcer in this part of the body is not so rare as is usually supposed. You may have, in fact, cancerous tumour of the stomach with only trifling pain, and in the early stage the patients may be free from any sufferings at all. A middle-aged woman was sent to me as an example of chronic atrophy of the stomach. She was intensely anæmic, and breathless on exertion, but was rapidly losing flesh. She had no pain, had a dislike to animal food, and suffered from occasional vomiting. No tumour could be found in the epigastrium. She stated that she had enjoyed good health until a few weeks before I saw her, when, without apparent cause, she was attacked by profuse hæmatemesis, which had not recurred; but ever since she had felt feeble and breathless. The fluid she next vomited contained sarcinæ, was of a dark colour, and when boiled with liquor potassæ formed a thick, tenacious jelly. The gelatinous nature of the vomited matters proved that a discharge was going on in the stomach, whilst the presence of sarcinæ seemed to show that the food was retained in the organ for an unusual length of time. I therefore diagnosed cancer at the pylorus, and the subsequent progress of the case proved the opinion to be correct. But I have told you the fact of a discharge likely to produce anæmia may be concealed by the patient. We had a very good example of this in the hospital last year. A woman, about sixty years of age, consulted me for severe neuralgic headache, from which she soon recovered, but she was observed gradually to become very anæmic. Finding that her circumstances were bad, and that she was unable to procure sufficient food, I advised her to enter the hospital. As she denied that she suffered from any discharge, and the anæmia steadily increased, I put her case down as one of chronic atrophy of the stomach. She gradually sank, but before her death stated to the medical registrar that she had suffered greatly from uterine hæmorrhage. On post-mortem examination, the stomach proved to be perfectly normal, but there were two tumours in the uterus, one of which was covered by clots of blood. Now, you will remark that all the above cases were females, and it will render your inquiries more searching if you bear in mind that, excepting in cases of cancer of the breast or of other organs, chronic atrophy of the stomach rarely occurs in women.

It will be only necessary for me to mention the anæmia that so constantly occurs in the young, and which appears to me to arise from the expenditure of blood required by the sudden development of the body not having been compensated for by an equally increased activity of the digestive and assimilating organs. Such cases occur only in early life, whilst chronic atrophy of the stomach is confined to that period when decay of the vital powers is in progress.

I need scarcely remind you that although the action of the stomach is necessary to enable the albuminous portion of the food to reach the vascular system, yet that a number of other organs must act upon it before it can be converted into blood. The spleen, liver, lymphatic glands, the marrow of the bones, and probably several other structures, co-operate in the process of sanguification; and, consequently, structural defects of all these parts are capable of producing anæmia. Such affections do not, however, stop the supply of new material, they only arrest the development of that which is absorbed. Consequently, you do not meet with the same intense bloodlessness as when the stomach is in fault; the patients are generally younger, and you have a test for this class of cases in the increased number of the white globules, constituting leucocythæmia. You may remark that in the cases of gastric atrophy there was a diminution instead of an augmentation in the number of the white blood-globules. In every case, therefore, of anæmia occurring in a person of or past the middle age, you ought to examine the blood microscopically so as to ascertain what proportion the white blood-cells bear to those that are coloured. You might reasonably expect that as the pancreas and small intestine co-operate with the stomach in the solution of the albuminous portions of the food, morbid conditions of these organs would also give rise to anæmia. But as the digestion and absorption of the fat and starchy materials of the food also take place in the small intestine, there is a great loss of flesh under such circumstances, which is not the case in chronic gastric atrophy. Nevertheless, we must still remain in doubt whether there are not structural changes of other organs besides the stomach that are capable of producing the "idiopathic anæmia" of Dr. Addison.[1]

Treatment.—It is unnecessary to mention the treatment of the cases where partial atrophy of the stomach is present, because it is mainly dependent on the nature of the affection of the other organs with which it coexists. But, as regards that of "idiopathic anæmia," and that form associated with cancer, I am sorry to say the results of treatment have been very discouraging. Every case in which I felt tolerably confident of the correctness of the diagnosis has gone on from bad to worse, without being apparently influenced by any of the measures adopted for its relief.

Almost every patient had been treated with iron, in some form, before he came under my notice, but no satisfactory results had ensued. For a time, some thought they had derived benefit, but the anæmia soon became more decided, although the medicine was steadily continued. I have tried arsenic, quinine, strychnine, and various other tonics, with equally unsatisfactory results. Pepsin was also generally prescribed, either alone or in combination with ipecacuanha or capsicum. There is one point, however, in which you may do great harm, and that is by the use of purgatives, more especially by salines. I have seen the patient's strength rapidly reduced by their use, and I would advise you, if the bowels are very inactive, only to employ the very mildest aperients.

The want of appetite renders the subject of diet one of great difficulty. In the earlier stages the patient can usually take chicken or fish, but, as the disease increases, these must be abandoned, and you must trust to soups, milk, &c. Fat and starchy materials are often taken without difficulty, even to the last. Many of those that have come under my observation have been sent from home, under the idea that change of air and scene might produce improvement. Travelling has usually done more harm than good, and in the later stages, as was the case in one of the patients before mentioned, a journey of very moderate length may cause fatal exhaustion.

Clinical Lecture
ON
SUBCUTANEOUS OSTEOTOMY IN RACHITIC AND OTHER DEFORMITIES.

Delivered in the Manchester Royal Infirmary, Feb. 5th, 1877,

BY S. MESSENGER BRADLEY, F.R.C.S.,

SURGEON TO THE MANCHESTER ROYAL INFIRMARY, AND LECTURER ON PRACTICAL SURGERY, OWENS COLLEGE.

GENTLEMEN,—During the last year you have seen several operations in this hospital in which different bones have been subcutaneously divided for the relief of rachitic and other deformities, and I propose drawing your attention to this subject of subcutaneous osteotomy this morning, because I think we are now in a position to come to a definite conclusion as to its position and place in surgery.

Although subcutaneous osteotomy as now practised is a comparatively recent introduction into surgery, the attempt to remedy deformities resulting from badly-united fractures and anchyloses is of ancient date. Hippocrates advises that ill-set fractures should be broken across, and the bones reset in a better position, although he adds no description as to how this is to be effected. Celsus is more precise, and states that the badly-united bones are to be broken by violent extension and counter-extension; he also says that

[1] I have lately examined the stomach microscopically in a case of "Hodgkin's disease," but the tubes were normal.

at an early period, before the callus is very hard, the deformity is to be remedied by the careful application of splints. Paulus Egineta even advises cutting down upon the angular fragments in cases of distortion following fracture. "If," says he, "the callus be of stony hardness we make an incision of the skin with a scalpel, and separate the union of the bones with chisels, and then cure the fracture as formerly said." With this distinguished author ancient surgery on this subject comes to an end, and, as in all other branches of the art, there is a long interval before any fresh start is made. It is not, indeed, until Rhea Barton, of Philadelphia, in 1826, divided the neck of the femur, that we meet with any important record of improvements in osteotomy or osteoclasm. We find that the last-named surgeon, at the date mentioned, sawed through the femoral neck in a case of distortion from bony anchylosis of the hip, and replaced the limb in a straight line with the trunk, the patient making a good recovery. Scattered about the medical journals of different countries we meet after this with occasional records of such operations, and at length, in 1854, Langenbeck published his mode of performing subcutaneous osteotomy, which, in essentials, is the operation practised to-day.[1] It is only, however, quite recently that the procedure has come much into vogue, and probably more operations of this nature have been performed within the last few years than in all previous time. In the year 1876, for example, M. Boeckel, of Strasburg, performed osteotomy thirty-four times; Volkmann, of Halle, thirteen times; while in London W. Adams, Maunder, Galt, and others have had numerous cases. All M. Boeckel's and Volkmann's cases were successful, and our experience in Manchester, if less extensive, is equally bright, for during this period Mr. Lund has performed osteotomy of the neck of the femur three times; Mr. T. Jones, at the Children's Hospital, has subcutaneously divided the tibia eight times, and I have performed a similar operation four times, all cases terminating favourably. Perhaps these few statistics may serve to show you that, with certain precautions shortly to be mentioned, the operation is not one dangerous to life, while the results are so uniformly excellent that it may fairly be held to have established its claims to be considered one of the standard operations of surgery.

Let me briefly draw your attention to some of the cases in which we have found it necessary to perform this operation in Manchester. This little girl, six years of age, was admitted into the infirmary on October 13th, 1876, with extreme rachitic deformity of both legs. The convexity of the curve on both sides was outwards, and confined to the lower third of the leg-bones. Like most cases of rachitic deformity, it manifested itself whilst the child was learning to walk, and through the mother's carelessness it reached the condition presented on admission, when locomotion to any extent was no longer practicable, the outer side of the ankle and the leg above it touching the ground when the child tried to stand upright. There was also some anterior bowing of the tibiæ. Having proved, under chloroform, the impossibility of forcibly straightening the limbs, I proceeded, on October 20th, 1876, to divide the tibia on one side with hammer and chisel. I was induced to try this plan, so strongly advocated by Maunder, and so extensively adopted both in London and on the Continent, on account of the objections which were originally raised to Langenbeck's operation with auger and saw, and which has since been renewed, that the resultant bone-dust left by the saw rendered the parts prone to suppuration. I accordingly made an incision three-quarters of an inch long on the inner concave aspect of the tibia and down to the bone, and then proceeded to divide it with the hammer and chisel. The bone, however, proved so extremely hard—sclerosed, in fact—that I desisted from further use of the chisel, and completed the division (very easily) by means of a narrow-bladed saw. On completing the division of the tibia, the fibula was so hard I could not break it, and I was consequently compelled to enlarge my original incision by a cross cut, and to saw the splint bone separately. The operation was performed under the carbolic spray, and the usual dressings applied. No particular fever followed the operation, and on the fourth day I restraightened the leg, and put it on a back splint with an outer side splint. Throughout the dressings were changed under the spray. Some suppuration ensued, and it was not until December 10th, 1876, that the external wound had completely healed. At this time the bones were once more firmly united, and, as you see, the limb was perfectly straight. Now, note the different progress of the case when the bones of the other leg were divided. On November 17th, 1876, I proceeded to divide the tibia on the opposite side. This time I did not use the hammer and chisel, but employed a tenotomy knife and a short straight narrow-bladed saw. The division was effected with the greatest possible ease through a small puncture made with the tenotome, and when the division was complete, and the leg brought into a straight line, the punctured wound was closed with collodion, and the limb put up on a back splint. On this occasion the spray was dispensed with. On the third day I found the external wound firmly closed up, and all that we had to wait for was the consolidation of the divided bones. This proceeded satisfactorily, and, as you see, the limb is now quite straight and strong. In a word, it required six weeks to heal the wound made with the chisel, and two days to heal that made with the tenotome and saw; so that it certainly seemed to me that we had in these two operations a fair example of how to do it, and of how not to do it. At the present moment, as you see, the legs are straight, and the bones quite strong, but walking is still very imperfectly performed. This is due partly to wasting of the leg muscles and partly to want of practice. For the time, locomotion is a forgotten art, and will have to be learnt over again. One other point merits attention: observe how loose the knee-joint is. So loose, indeed, is the entire articulation that you can place the leg laterally at almost a right angle with the thigh. This is a common feature in rickets, and one which constitutes a special difficulty in treatment. The epiphyses are large, and the ligaments so loose that the limb is almost like a flail. The only method of overcoming this is to maintain the limbs in a straight line, by means of starch bandages or some other immovable apparatus, and at the same time, by appropriate general treatment, sea air, exercise, lime, &c., to endeavour to remove the diathetic taint.

The sturdy little boy who stands by the young lady's side is another example of the same disease and of the same treatment. His legs, which now are straight enough for anyone, were as curved as a Turkish scimitar when he came into the infirmary on Oct. 13th, 1876. He was then only three years old, but already the bones were so firm that I failed to straighten them by forcible handling under chloroform. I consequently divided both tibiæ a few days later, on their inner or concave aspects, by means of the tenotome and narrow saw, easily fracturing the fibulæ on both sides. The punctures were sealed with collodion, and the limbs put up quite straight on a back splint. From these back splints they were not removed, nor were the wounds redressed, for three weeks, when firm union was found to have taken place. In this case the spray was not employed. I cannot say precisely when the external wounds healed, as the bits of lint were not removed, but this doubtless took place in a day or two; there certainly was no suppuration or inflammation. Besides these two cases of union, Mr. T. Jones has had other four cases at the Children's Hospital of a similar nature, dividing eight tibiæ with tenotome and saw, all turning out perfectly satisfactory.

And now, gentlemen, let me draw your attention to another class of cases in which you have seen subcutaneous osteotomy performed for the relief of deformities. I refer to Mr. Lund's cases, where he has divided the femoral neck on account of bony anchylosis having taken place at the hip-joint, his object being to establish a false joint, and so to loosen the patient from his bony bonds and give him freedom. Mr. Lund first performed this operation on March 5th, 1875, on a man with rigid anchylosis of both hips, who was terribly incommoded by his condition, and unable either to walk or sit. The case has been already detailed in one of the medical journals, and therefore I shall content myself with brief reference. The operation was performed with antiseptic precautions, after Mr. W. Adams's plan, by means of a narrow-bladed knife and narrow saw. The man never had a bad symptom. Passive movement was commenced twenty-four days after operation, extension being

[1] Dr. Gussenbauer, in the Archiv für Klinische Chirurgie for 1875, gives a good historical summary of the subject. An account of Langenbeck's operation is given in Schmidt's Jahrbucher for 1855, p. 95; the instruments he employs are an auger 2‴ broad, a straight saw 1½‴ broad, and a strong knife.

meanwhile employed to keep the divided surfaces asunder. In eighty-four days, finding the patient able to support himself upon this leg, Mr. Lund proceeded to divide the opposite femoral neck in the same way. In fifty-seven days after the second operation the patient was permitted to sit up, and soon after he began to walk about a little. Since then he has gone on uninterruptedly well, and Mr. Lund informs me that quite recently he has heard from the man that he had walked a mile the day before. Mr. Lund has since performed the operation on three other cases, and with uniformly good results. In no instance has suppuration or pyrexia followed the operation, and in each instance he has been able to establish and maintain free and easy motion at the new joint.

Such cases as these serve to support the principle that subcutaneous operations are free from risk. You here see many different structures, skin, fasciæ, muscles, vessels, nerves, and bones, divided without any disturbance of the general economy, and we are in a position indeed to affirm that subcutaneous surgery ought never to be followed by putrefactive inflammation. I do not say by inflammation, for this may happen in spite of every precaution, and, indeed, does happen. We often meet with cases of cellulitis, &c., without any lesion of skin, and not unfrequently we find that simple fractures, which are *de facto* subcutaneous wounds, are followed by cellulitis; but we also invariably find that when such is the case the inflammation runs a simple course, the products either being absorbed, or, if they pass into a state of suppuration, that the resulting abscess is limited by a distinct wall, and never leads of itself to septic change.

Perhaps the experiments of M. Guérin in 1840 demonstrate with more force than others the absolute safety of subcutaneous wounds. Amongst many other experiments on an equally liberal scale, he, for example, subcutaneously divided in a dog all the spinal muscles from neck to sacrum, and, in the same victim, all the muscles, vessels, and nerves on the outer side of both thighs, and all this butchery was done without constitutional disturbance, and with rapid and completely non-inflammatory healing.[2] The exclusion of air, then, secures a good result, and renders an operation safe; but we now know that it is not the air which does harm, but something in the air, and that if we can exclude this something we may allow the air free entrance. The researches of Pasteur, corroborated by the experiments of Tyndall, Lister, and Roberts, lead us to the conclusion that the cause of all putrefaction—and it is putrefaction which we have to dread—is the presence of bacteria, and hence to exclude bacteria, or, what comes to the same thing, to destroy the bacteria already present, is to render putrefaction impossible.

Of course you will readily understand that all air is not equally impregnated with these organisms: thus, e.g., Tyndall recently found that his experiments as to the causes of putrefaction were rendered very difficult, and even nugatory, when performed in the vitiated air of the Royal Institution, but that he was able to perform the same experiments with ease and success in the purer air of Kew; and for the same reason it follows that we may securely perform operations in some atmospheres without those precautions which are absolutely necessary in an air less pure.

The object of the antiseptic method is in the main to prevent putrefaction, by excluding or destroying these mischief-making germs; hence the *rationale* of subcutaneous surgery and antiseptic in surgery is one and the same—viz., not to exclude the air, but to shut out bacteria. Neither plan prevents the advent of inflammation, but both hinder putrefaction and consequent septic evils. Thus, for example, you learnt in the first case, which I showed you to-day, that considerable suppuration had followed the operation, but that, owing to antiseptic treatment, the pus had no chance of putrefying and poisoning the system. At the present time I am engaged in testing the germicidal properties of various agents, such as carbolic acid, salicylic acid, boracic acid, iodine, bromine, chloride of zinc;[3] and though in doing this I am only going over ground which has been in a great measure traversed before, and although I do not even hope to see results more regular or more satisfactory than are already secured by the method of dressing introduced by Lister, I do not, therefore, deem it a necessarily unprofitable labour, but one which may prove of some practical value, if it be only to simplify the at present somewhat complicated dressings and troublesome details of the antiseptic method. In regard to the use of the spray and of the special form of dressings adopted by Lister, I must confess, indeed, to a feeling of doubt as to their ultimate retention by the surgical profession. In a very foul atmosphere, where bacteria abound, it may be well to employ some such means as the spray-producer of keeping the parts free from falling germs, but in a pure air this can hardly be necessary. And even in our much-vilified infirmary atmosphere we may fairly doubt the need of this troublesome impedimentum; for, as a fact, bacteria do not here abound, but, on the contrary, as Dr. Dreschfeld and I have both found, are very few and far between; certainly they do not hover like a cloud above the hands of the operator. Nor is this all that is to be said in criticism of the use of the spray, but we may also question its efficacy as a germicide. I do not think the carbolic vapour produced represents a higher percentage of the acid than 30 per cent., and we have reason to greatly doubt whether this strength is fatal to the life of bacteria; so that on the whole I fail to see why the same object would not be equally well and certainly attained by previously washing the parts (as is already done, indeed) with carbolic soap, and by taking the greatest care that every instrument and sponge is perfectly clean. It is quite certain that if it turn out that we may safely dispense with the spray and the special dressings of Lister, the antiseptic method will have many more followers than at present.

Turning, however, from this criticism of some of the details of antiseptic surgery to the broader view of its real value, we may confidently affirm that, antisepticity being strictly enforced, it matters little whether we employ the hammer and chisel of Maunder or the saw and tenotome of Adams, as in both cases we can as confidently predict the result as when dealing with a wound altogether subcutaneous; but, neglecting such precautions, it will probably make all the difference in the world whether we have to deal with the large open wound of the one operation or the small punctured wound of the other; and, further, it may be added that although the risk of septicæmia is manifestly greater in the former than in the latter operation, antiseptic precautions being disregarded, he cannot be held blameless who, in the present state of knowledge, does fail to take these precautions in either one class of cases or the other.

Returning, however, to what is now strictly the subject in hand, I would not have you suppose, gentlemen, from what I have said, that every case of rickety deformity of the legs, or that every case of bony anchylosis of the hip, is to be treated by subcutaneous osteotomy; for, in coming to such a conclusion, you would greatly err. In the former condition, many cases are curable by less severe measures; in the latter, many cases are beyond the reach of cure even by such an extreme step, and therefore I perhaps cannot better conclude this lecture than by briefly indicating the different modes of treatment necessary in different degrees and kinds of the two affections. And first as to rickets.

The cases of rickets demanding surgical interference may be divided into three groups:—

1. *Cases taken at an early stage, when the crooked limbs yield to splints and bandages.* This is a large class, and the plan should always be tried to begin with, when the bone is at all soft and the child young. I am in the habit of advising the use of a light wooden splint, to be worn only at night, and applied along the inner side of the leg and thigh by means of a domette flannel bandage. I learnt this from Mr. Lund many years ago, and have ever since used it, and with benefit. If the case be a little too obstinate for this treatment, splints worn during the day as well must be substituted for those worn only at night.

2. *Cases incurable by the former method, but which yield to forcible manipulation under chloroform.* — When rickety legs cannot be straightened by the use of splints, the child should be placed under the influence of chloroform, and an attempt should be made to rectify the deformity by forcible bending of the bones. Many cases yield to such treatment, and, in thus dealing with them, it matters very little whether in our efforts to straighten the bone we break it (osteo-

[2] Vide Guérin: Memoires sur les Plaies Sousentanées. Paris, 1840.

[3] On this subject vide Braidwood's and Vacher's first report to the British Medical Association, and printed in the Journal, on the Life History of Contagion.

claim) or not, as the fracture so produced always unites, and the leg is not one bit the worse or the weaker in the long run.

3. *Cases which have resisted both the former methods of treatment, but which may be cured by subcutaneous osteotomy.*—This is the class to which I have specially drawn your attention this morning, and which, I think, may be said to include all cases not coming under the first two heads. From time to time surgeons have advocated the use of instruments, in appearance worthy of an old torture-room, to break the crooked rickety bones when they resisted the pressure of the hands; but by most these appliances are relegated to the limbo of forgotten rubbish, and, as it seems to me, wisely, since we have in subcutaneous osteotomy an operation at once so safe and so satisfactory. And one final word on this subject. When subcutaneous osteotomy is performed for the cure of rickety legs, we need be under no apprehension about the filling up of the V-shaped interval which is necessarily left when the bones are straightened, for, as a matter of experience, this gap always does fill up with fresh bone, and thus we secure not only a strong and straight leg, but a limb not shortened, as it would of course be if we were compelled to excise a wedge-shaped piece of bone instead of simply sawing across the concavity.

Now, turning to bony anchylosis of the hip, let us tabulate the various kinds of this condition and the different treatment necessary, as we have already done with rickety deformities. In doing so I shall in a great measure follow the classification of Mr. W. Adams. The anchylosis referred to is always bony.

1. Cases of anchylosis following injury in the healthy subject, and also cases of anchylosis following the long retention of one position, also in the healthy subject. In both, subcutaneous osteotomy is the proper treatment. I have already given my reasons for preferring the use of the tenotome and saw to the hammer and chisel.

2. Cases of anchylosis due to rheumatic inflammation, and cases of anchylosis due to chronic pyæmic inflammation. In both, subcutaneous osteotomy *may* be performed. In both the first and second group of cases the operation is performed either with a view to rectify an abnormal position of limb and to reproduce an anchylosis in the straight line (Adams's operation), or it is undertaken when the limb is already in a right line with the trunk, with the intention of procuring motion by the establishment of a false joint (Lund's operation). It is manifest that if the latter object be aimed at, success will more likely follow in the traumatic and pyæmic cases than in those due to rheumatic mischief, as the proclivity to a restiffening of the new joint and the recurrence of anchylosis is so much greater in the latter.

3. Cases of anchylosis in strumous subjects, following strumous arthritis, and followed by partial or complete absorption of the head and neck of the femur. In none of these cases is Mr. Lund's operation indicated, but in the milder set of such cases Mr. Adams's method may be adopted with reasonable hope of a good result. When the neck is absorbed, of course it cannot be divided, and therefore Adams's operation cannot be performed; but even in such extreme cases, if the position be very faulty, the plan recommended by Mr. Galt, of dividing the femur by means of a fine saw immediately below the lesser trochanter, may be carried out with a fair prospect of success.

INQUIRY INTO THE

GENERAL PATHOLOGY OF SCURVY.

BY CHARLES HENRY RALFE, M.D. CANTAB.,

SENIOR PHYSICIAN TO THE SEAMEN'S HOSPITAL, GREENWICH; TEACHER OF PHYSIOLOGICAL CHEMISTRY IN THE MEDICAL SCHOOL OF ST. GEORGE'S HOSPITAL.

(*Concluded from vol. i., page 871.*)

3. *The inorganic constituents of scorbutic and antiscorbutic diets.*—In Table IV. the daily rations of the English sailor at sea are contrasted with those of the soldier on home service, each being fair instances of scorbutic and antiscorbutic diets respectively, since there can be little doubt that with such a dietary the sailor, except for the occasional use of fresh vegetables when in port, or the protective influence of lime-juice when at sea, would speedily become scorbutic. Table V. gives the alkalinity of the ash and the inorganic constituents of the chief articles of food in each dietary in 100 parts; and in Table VI. I have given the total alkalinity and amount of inorganic salts ingested daily by the soldier and sailor respectively.

TABLE IV.

Daily dietary of the English sailor and soldier.

SAILOR AT SEA.[1]	Ounces.	SOLDIER ON HOME SERVICE.[2]	Ounces.
Salt meat	16	Meat	12
Biscuit or soft bread	24	Bread	24
Flour	9	Potatoes	16
Peas	5	Other vegetables	8
Currants and raisins	1¼	Coffee	¼
Chocolate	1	Tea	¼
Tea	¼	Salt	½
Sugar	2	Sugar	1¼
Suet	½	Milk	3½
Total	59¼	Total	65½

[1] Royal Navy Scale of Victualling, taken from Report of Committee of the Society for Improving the Condition of Merchant Seamen, printed in 1867. Since then, however, a quarter of a pound of preserved potatoes, on alternate salt-beef days, or twice a week, has been added to this dietary.

[2] Manual of Practical Hygiene, by E. Parkes, M.D., F.R.S. Second Edition, p. 180. 1866.

TABLE V.

The alkalinity of the ash and the inorganic constituents of the principal articles of food, in 100 parts.

	Fresh Meat.	Salt Beef.	Potatoes.	Peas.	Flour.
Alkalinity of the ash as Bicarbonate of Potash	0·62 grm.	0·56 grm.	1·31 grm.	1·12 grm.	0·32 grm.
Phosphoric acid	·58 grm.	·42 grm.	·19 grm.	·35 grm.	·45 grm.
Chlorine	·11 „	·72 „	·04 „	·02 „	·01 „
Sulphuric acid	·07 „	·03 „	·05 „	·06 „	·01 „
Lime	·06 „	·03 „	·02 „	·06 „	·03 „
Magnesia	·04 „	·04 „	·03 „	·07 „	·11 „
Potash	·52 „	·34 „	·54 „	·39 „	·22 „
Soda	·13 „	·84 „	·04 „	·12 „	·09 „

The proportion of albuminates in both dietaries is about equal—perhaps, if anything, it is in favour of the soldier; for, though the sailor gets sixteen ounces of meat to twelve received by the soldier, allowance must be made for the weight of salt and the nutritious matter dissolved out into the brine. But the sailor's dietary is below that of the soldier in actual quantity, and this deficiency is caused by the withdrawal of no less than twenty-four ounces of succulent vegetable food, which is poorly replaced by nine ounces extra of flour, five ounces of split peas, and an ounce and a half of currants and raisins. The presence of a considerable amount of chloride of sodium from the salted provisions

renders the total weight of the ash higher in the sailor's rations than in the soldier's, otherwise the inorganic constituents are less, notably the potash, whilst the alkalinity of the ash is considerably lower. This diminution of the alkalescence of the ash has no relation to the deficiency of potash, nor is it caused by the increase of the neutral salts, but is absolute, as can be shown by the fact that if sixteen ounces of fresh meat be given instead of sixteen ounces of salt, the alkalescence is only increased 0·2 grm., whilst the potash is increased 0·8 grm., the chlorine and soda being diminished 3·12 grms. and 3·18 grms. respectively.[3] The cause of the higher alkalescence of the ash of the soldier's rations can be understood by a reference to Table V., where it will be seen that there is ·76 part of phosphoric acid, chlorine, and sulphuric acid, to ·75 part of lime, magnesia, potash, and soda, in 100 parts of fresh meat; whilst in 100 parts of potato there is only ·28 part of phosphoric acid, chlorine, and sulphuric acid, to ·63 part of lime, magnesia, potash, and soda, the alkaline bases being chiefly in combination with vegetable organic acids, and which by oxidation yield *alkaline carbonates*.

TABLE VI.

Total alkalinity of the ash and the inorganic[4] constituents of the daily ration of the sailor and soldier.

	Sailor.	Soldier.
Alkalinity as Bicarbonate of Potash ...	5·9 grms.	10·3 grms.
Phosphoric acid ...	5·49 grms.	6·01 grms.
Chlorine[5]	3·61 „	·64 „
Sulphuric acid[6]	·23 „	·55 „
Lime	·34 „	·51 „
Magnesia	1·11 „	1·05 „
Potash	3·64 „	5·69 „
Soda	4·59 „	1·27 „
Total	19·01 grms.	15·90 grms.

We will now proceed to the consideration whether the changes which occur in the blood and tissues in scurvy are due to the withdrawal of some special constituent required directly for their nutrition, or are brought about by some chemical alteration in the quality of the blood, which interferes with the processes of nutrition. And here we pass from the domain of fact to the region of hypothesis, for we know as little of the part played by the inorganic substances in histogenesis as we do of the variations that daily and hourly occur in the chemical composition of normal blood, and we have yet to learn what action—physical as well as chemical—the inorganic constituent of each tissue has on the albumens, fats, salts, and water that compose that tissue, and how far excess or diminution of these constituents influences oxidation and nutrition going on in the textures. The chief argument which can be urged against the view that scurvy originates from a physical cause, as the withdrawal of some special constituent required for the nutrition of the blood and tissues, is that scurvy is not a disease brought on by mere reduction in the amount of food. A starving man subsisting on roots and berries will not have scurvy, whilst the most liberal allowance of meat will not prevent its occurrence if fresh vegetables are withheld; the amount, however, required of these is small, and out of all proportion to the immense protective influence they afford. The argument that tells against the hypothesis that scurvy originates from the withdrawal of some constituent required for the histogenesis of the blood and tissues, supports the view that the disease is primarily brought about by some chemical alteration in the quality of the blood.

[3] With sixteen ounces of fresh meat taken in place of sixteen ounces of salt, the sailor's ration would yield: alkalescence as bicarbonate of potash, 6·1; phosphoric acid, 6·07; chlorine, ·49; sulphuric acid, ·47; lime, ·57; magnesia, 1·05; potash, 4·45; soda, 1·41; total 14·51 grms.

[4] No deduction has been made for weight of bone, and the weight of bread and biscuit has been calculated as flour.

[5] The salt taken with the food is not calculated.

[6] The quantity of sulphuric acid seems small, but it must be remembered that the sulphuric acid passing out of the system is chiefly derived from the oxidation of the sulphur of the albuminous substances in the body, and not so much from the sulphates taken with the food.

We have seen that in the urine of scurvy patients the following characters may be noted:—1st, increase of uric acid; 2nd, diminution of acidity of urine; 3rd, reduction of alkaline phosphates. And we have also seen that the same changes, with the exception that the acidity of the urine was increased, followed the withdrawal for a short time of vegetable food. The fact, however, that the *pathological effect* of the withdrawal of succulent vegetable food is to diminish, and the *physiological effect* to increase, the acidity of the urine is not contradictory, or opposed to the view that the alkalinity of the blood is diminished in both instances. As long as health is maintained, a considerable quantity of acid is formed in the system from metamorphosis of the food and tissues, and probably also, as Dr. Parkes[7] has suggested, from decomposition of some of the chloride of sodium, which a nitrogenous diet prompts one to make use of in considerable quantities. When, however, the disease is induced the amount of acid derived from these sources is lessened, whilst the full effect of the withdrawal of the carbonic acid derived from the oxidation of the vegetable acid is fully felt. I have already (p. 870, vol. i.) explained how, by decomposition of two salts having an alkaline reaction—the acid carbonate and neutral phosphate of potash or soda—the acidity of the urine is produced, and why the free acidity of the urine may be lessened at the same time that the alkalinity of the blood is diminished. Indeed, it may be stated that the physiological effect of the withdrawal of fresh vegetable food is to diminish the alkalinity of the blood by increasing the acid salts (chiefly urates), and the pathological effect is to reduce the alkalinity by decreasing the salts having an alkaline reaction—viz., the acid carbonates. We have also seen that the alkalinity of the ash of a typical scorbutic diet is considerably less (more than four grammes of bicarbonate of potash) than the alkalinity of the ash of a typical antiscorbutic diet, and this diminution is nearly the same with fresh as with salt meat, and that the higher alkalescence of the ash of the antiscorbutic ration was shown to be caused by excess of alkaline carbonates,[8] derived from the oxidation of the vegetable organic acids in combination with the alkaline oxides. Now the reaction of the blood in the living body is always alkaline, and under no condition has it ever been observed to become acid. What the degree of alkalescence of normal blood is has not been determined, but it is probable that, like the temperature and specific gravity, it has certain definite limits which cannot be passed in either direction without causing disturbance of healthy nutrition. Experiments made on animals to reduce the alkalinity of the blood, or to neutralise it, have all ended sooner or later in the death of the animal, and the changes observed in the blood and tissues after death are identical with those found in the bodies of patients dying from scurvy—namely, dissolution of the blood-globules, ecchymoses in the heart, with blood-stains in the mediastinum, gums, and mucous surfaces, whilst the muscular structure of the heart, the muscles generally, and the secreting cells of the liver and kidneys become granular and even distinctly fatty[9]. Exactly similar conditions have been observed in animals dying after having been fed for a considerable time on food yielding only an acid ash;[10] and not only did the post-mortem changes resemble those of scurvy, but the symptoms preceding death were exactly alike—namely, great feebleness, tremor, and failure of the heart's action, the blood at the time of death being still alkaline.

From a review of the above considerations and facts I

[7] Dr. Parkes's Observations on the Dietetic Treatment of Disease, THE LANCET, May 23rd, 1874.

[8] It may be urged that whilst I have stated that the alkaline phosphates of the urine are diminished in scurvy or by the withdrawal of fresh vegetable food (*vide* Tables I. and III.), such diminution cannot be accounted for by reference to the tables of diet. On the contrary, it will be seen from Table V. that one pound of meat yields more than double the amount of alkaline phosphates derived from a pound of potatoes. This apparent discrepancy, however, may be explained by the hypothesis that some portion of the alkaline phosphates is retained in the system to compensate in some degree for the withdrawal of the alkaline carbonates. This view is in accordance with experimental fact; for F. Hoffman, to ascertain the effect of acids on blood, fed pigeons with a food yielding an acid ash, and found that the body, under such circumstances, retained its alkaline salts with great obstinacy.

[9] Leyden and Munk: Virchow's Archiv, xxii., 237; Die acute Phosphorvergiftung. Berlin, 1865. Traube: Berliner Klinische Wochenschrift, Nos. 9-15. 1864.

[10] F. Hoffmann: Ueber der uebergang von frein säuren durch das alkalische Blut in den Harn; Zeitschrift für Biologie, vii., 399.

venture to think we may draw the following inferences, if not conclusions:—

1. That the primary change that occurs in scurvy is a *chemical alteration* in the quality of the blood.

2. That this chemical alteration, as far as can be judged from inferences drawn from the analysis of urine in patients suffering from scurvy, and analysis of "scorbutic" and "antiscorbutic" diets, points to a *diminution of the alkalinity of the blood*.

3. That this *diminution of alkalinity* is produced in the first instance (physiologically) by an increase of acid salts (chiefly urates) in the blood, and finally (pathologically) by the withdrawal of salts having an alkaline reaction (chiefly alkaline carbonates).

4. That this *diminution of the alkalinity* of the blood finally produces the same results in scurvy patients as happens in animals when attempts are made to reduce the alkalinity of the body (either by injecting acids into the blood or feeding with acid salts)—namely, dissolution of the blood-corpuscles, ecchymoses, and blood-stains on mucous surfaces, and fatty degeneration of the muscles of the heart, the muscles generally, and the secreting cells of the liver and kidney.

Queen Anne-street, W.

A CASE OF FRACTURE OF THE CRANIUM; IMPACTION OF BONE, AND EXTENSIVE DESTRUCTION OF BRAIN-SUBSTANCE.

SUCCESSFULLY TREATED.

BY WILLIAM PIRRIE, F.R.S. EDIN.,
PROFESSOR OF SURGERY IN THE UNIVERSITY OF ABERDEEN.

JOHN M——, aged twenty-three, a farm-servant, was admitted into the Aberdeen Royal Infirmary on the 17th of April, 1877, in consequence of having received a fracture of the skull. The day before his admission he was riding on horseback, and fell off, striking his head against a pointed iron projection on the top of a pump, and thus sustained the injury. He was not unconscious either at the time of meeting with the accident or afterwards. On the evening of the day after the accident he was conveyed a distance of seven miles, to the infirmary, and placed under my care. During the night he complained of severe pain in the head, but was perfectly sensible, and drank about half a pint of milk at various intervals. His head was shaved, and simple water dressings were applied to the seat of injury.

At 12 (noon) next day, about forty-eight hours after the accident, I made an examination of the part, and found a circular punctured wound of the scalp, about a quarter of an inch in diameter, through which blood and brain-matter were being discharged. On introducing a probe through this wound, I felt sure that portions of the fractured bone had been driven into, and were lodged in, the substance of the brain; but neither then nor at any period since the receipt of the injury had the man in any degree lost the full possession of any of his senses or faculties. His pupils were in no way affected, and were subject to the influence of the various degrees of light as in health.

Such being the state of parts, I considered it necessary to resort to operation for the removal of the fractured portions of bone lodged in the substance of the brain. The patient having been brought under the influence of chloroform, I made a semicircular incision in the scalp, below the punctured wound, with its convexity downwards, as will be seen by a glance at the accompanying woodcut. On raising the flap, a considerable quantity of blood and broken-down brain-substance escaped; and an oblong fracture of the vault of the cranium, one and three-quarters of an inch long, from before backwards, and three-quarters of an inch wide, from above downwards, was discovered, situated about the middle of the left half of the coronal suture, involving part of the frontal and parietal bones. Six spicules of bone, partly attached by their bases to the edge of the fracture, with their free extremities piercing the dura mater and lodged in the substance of the brain, were carefully removed; but when collected together, and compared with the aperture in the cranium caused by the fracture, they were found to fill up the space only in a very small degree. On looking into this space, I saw that the dura mater was torn and lodged in a laceration of the brain, which was about one inch and three-quarters long, and three quarters of an inch broad. The long axis of the laceration was from before backwards. Feeling sure that a large piece of bone had been driven into the brain, causing the laceration, and suspecting that it might still be lodged there, I first introduced a probe, and afterwards my finger, which was easily done without increasing the size of the laceration, down to the bottom of the wound in the brain, and discovered a piece of bone resting on the base of the skull. With the aid of a long narrow necrosis forceps, I carefully

extracted this piece of bone, which was about an inch and three-eighths long, and three-quarters of an inch broad, and, being anxious to make sure that no more fragments of bone still remained in the brain-substance, I gently inserted my finger a second time down to the bottom of the laceration of the brain, and felt the anterior clinoid processes of the sphenoid bone quite distinctly, but no broken fragments of bone. Before extracting the above-mentioned piece of bone, there was blood flowing from the wound, and, after the bone was removed, the hæmorrhage was increased, but on exposing the brain to the air, the bleeding gradually stopped. During the time the brain was exposed to view it was seen to rise and fall synchronously with the pulsations of the arteries, but there was no movement synchronous with expiration or inspiration. At this time the man vomited, and each time he did so a mass of brain-matter was made to bulge out through the aperture in the bones, but receded again on the cessation of each act of vomiting. The bleeding having ceased, the semicircular flap which I had made in the scalp was brought down, and secured by means of two catgut sutures, one at each side, and light water-dressings were applied to the part. After some days I ordered a lotion, containing one grain of the sulphate of zinc and a few drops of the compound tincture of lavender to the ounce of water. This was used for some time, but as about a quarter of an inch of the incision which I made in the scalp had not yet healed, I applied some unguentum resinæ to the part, under which treatment the whole of the wound speedily healed. In a day or two afterwards the man left the infirmary with his common sensation, his mental operations, his organs of special sense, and his motor powers neither lost nor in any way impaired. The state of the pulse, respiration, and temperature, during the time of his sojourn in the hospital, was normal.

This case appears to me to be worthy of record, on account of the extent and character of the fracture of the cranium, the laceration of membranes, and the extensive destruction of brain matter, and more especially on account of the wonderful and perfect recovery which the man made, without any evidence whatever, at any period, of inflammatory mischief of the brain proper or its coverings; without any hernia cerebri, although the brain was only supported by

the flap of the scalp; and without any disturbance or impairment of consciousness, common sensation, the organs of special sense, or motor power.

Aberdeen.

THE

STRUCTURE OF THE ISLAND OF REIL IN APES.

BY HERBERT C. MAJOR, M.D. EDIN.,
WEST RIDING ASYLUM, WAKEFIELD.

(*Concluded from p. 46.*)

PASSING now to the consideration of the structural elements of the cortex more minutely—that is to say, with a higher magnifying power—the nerve-cells again first claim attention. And it is necessary that these should be dealt with layer by layer, both for the sake of accuracy of description and in order that comparison may be made between them and the corresponding bodies in the human organ. Such description, however, it may be at once said, will have reference chiefly to the size of the corpuscles. In an article on the Brain of the Chacma Baboon[1] I have described and figured minutely the cells of the various layers, and, speaking generally, the description there given of the form and character of the cells applies accurately to those of the corresponding layers of the insula in the specimens of ape now under consideration. To the drawings illustrative of the paper referred to, therefore, I would venture to refer as being of material assistance in the following description.

No difference between the nerve-cells in the different specimens of ape, sufficient to warrant a separate description, has been detected; and the dimensions which will be given represent, as nearly as practicable, the average sizes in all the specimens examined.

First cortical layer (external) (Fig. 2, 1).—Two varieties of corpuscles are present in this layer. 1. Round or oval nucleus-like bodies, containing one to three granules, and faintly stained by logwood. 2. More deeply stained, oval or angular, and often branching corpuscles. Average size of both varieties (longest diameter) ·008 mm. to ·012 mm. (In human brain ·008 to ·012.)[2] These corpuscles seem in all respects similar to those in the human organ, as also in the Chacma baboon.[3]

Second layer (Fig. 2, 2) — Small pyramidal corpuscles closely set together, their apices directed outwards. Branches evident with a high power. Average size ·012 mm. to ·016 mm. (Human insula ·012 mm. to ·02 mm. rarely.) *Conclusion:* Except as regards size, these cells present all the characters of those in man.

Third layer (Fig. 2, 3).—Presents conical cells of larger size than the previous layer. Apices directed outwards. Average size ·016 mm to ·02 mm. (Human insula ·02 mm. to ·028 mm.) *Conclusion:* The large cells are decidedly smaller than in man; they appear also less numerous; the branches seem to be decidedly fewer than in the case of the corresponding cells of the human insula.

Fourth layer (Fig. 2, 4).—Almost entirely small oval or angular nerve-cells, very uniform in size and appearance. Average size ·008 mm. to ·012 mm. occasionally. (Human insula ·012 mm. to ·02 mm. rarely.) *Conclusion:* Except in slight variations in the size of the corpuscles, the cells resemble exactly those of the corresponding layer in man.

Fifth layer (Fig. 2, 5).—Cells of variable size. Many have the same characters as those in the third layer, and some are equal to the latter in size. Average size ·016 mm. to ·02 mm. (Human insula ·02 mm. to ·024 mm.) *Conclusion:* The general appearance and arrangement of the cells are much the same as in man, but in size they are smaller.

Sixth layer (Fig. 2, 6).—Average size of cells ·016 mm.; cells angular and branching; no spindle forms observed. (Human insula ·016 to ·02.) *Conclusion:* The cells of this layer of insula differ from those of the corresponding layer in the human brain, as also from the cells of the sixth layer *in other parts of the ape brain*, in not presenting to any notable degree the spindle form. Probably this is due to the absence of folds in the grey matter of the insula in the specimens of ape examined.

With respect to the intimate nature of the nerve-cells in the ape—that is to say, the structure of the nuclei and surrounding protoplasm,—I must confess that with the highest magnifying power at my disposal (the *one-tenth* Hartnack) I have been unable to detect any peculiarity as distinguishable from the structure of human nerve-cells. I here exclude from consideration, however, the question of the number of the cell connexions, which will be introduced later.

The other structural elements of the cortex in the ape—viz., the neuroglia and the vessels—will need only a passing notice, seeing that with respect to them I have only negative results to state. I can detect nothing in the neuroglia by which it may be distinguished from that in man, and I may add from that in animals lower than the ape series. Similarly with respect to the vessels of the insula in man and in the ape I find no structural difference. The important question, however, whether there is any difference in *relative vascularity* (a point to be determined by injection only), I must at present leave untouched, and would recommend the subject as one well worthy of thorough investigation.

Passing to the consideration of other points which I have treated of in connexion with the human insula, the conclusion has to be recorded that, as in man, so in the ape, no difference is perceptible between the right and the left insula, either as regards outward characters or intimate structure.

Some departure from the character of the union of the white matter with the cortex in the human insula is observed in the ape, in the latter case the course of the fibres into the cortex being apparently regular and uninterrupted; but this I apprehend is entirely due to the absence, in the case of the ape, of the deep sulci present in the human insula.

To sum up now the foregoing conclusions, so as to concentrate as much as possible the questions at issue. The fact has been referred to that in apes generally, and very notably so in the four specimens under consideration, the insula is smaller than in the human organ, not only (as, of course, it must be) absolutely, but relatively to the other parts of the hemisphere. There can, I think, be no doubt on this point. Next, it has been shown that the depth of the cortex of the insula in the ape is decidedly less than in man. The fact is easy of demonstration, and admits of no question. But both the above points have reference to *quantity* of brain-matter, and do not touch the more important question of *quality*. Has then any *qualitative* difference between the insula in man and in the ape been shown at all, for the character and the number of the layers &c. were shown to present no dissimilarity? The answer is, *one* such qualitative difference has at least been demonstrated, and, as it is hoped, conclusively, in the size of the nerve-cells, which in several of the layers, and notably in the *third stratum*, were seen to be decidedly smaller than in man. This is the first important and real distinction which it is desired to draw, and one which concerns quality just as much as variations in the size of blood-corpuscles in different mammalia indicate a qualitative difference in the blood.

But it may be urged that my conclusions apply only to those apes the names of which were given at the commencement of my paper, and to these specimens they must be confined; and that in the insula of the Orang and Chimpanzee the structural conditions may be, as some have alleged, identical with those in man.[4] In the face, however, of the facts I have now recorded, and with the collateral evidence, so to speak, at hand, it is, I conceive, impossible to assent to such a proposition. As well, it appears to me, might it have been argued, had not the fallacy been disposed of by ocular demonstration, that the convolutionary arrangement of the hemispheres in the Orang and Chimpanzee would be found similar to that in man, instead of being only a very decided approach to the latter as compared with the brain of the lower species. It will be said, however, that, with regard to minute structure, actual examination has failed to elicit any difference between the cerebral structure in man and the Orang. I know not on what

[1] Journal of Mental Science, Jan. 1876.
[2] West-Riding Reports, vol. vi., p. 9. [3] Loc. cit., p. 504 et seq.
[4] St. G. Mivart's Man and Apes, p. 142.

ground such a statement can be made, unless it be the recorded experience of Dr. Lockhart Clarke, who, writing some years since, stated that between the structure (histological) in man and in the ape family he could detect no difference whatever.[5] If only with respect to the size of the nerve-cells in some of the apes, I am compelled, with all deference, to join issue with Dr. Clarke in expressing a different conclusion from that to which he has arrived, and believe, further, that even in the Orang inferiority in the size of the nerve-cells as compared with those in man will still be traced.

The other and final point of distinction between the nerve-cells in the ape and those in man, which I desire to draw, remains for consideration. It will be remembered that, in alluding to the nerve-cells of the third layer in the ape, reference was made to the fact that the branches of the cells appeared less numerous than in the corresponding human nerve-cells. In all probability it may with accuracy be said that the multiplicity of the cell connexions is directly proportionate to the number of the cell branches, notwithstanding that, in the cerebrum, the actual demonstration of nerve-cell anastomoses is a matter of the greatest difficulty and uncertainty. The same difficulty is experienced in the cerebral cortex in tracing the axes-cylinders of the fibre into the cell, yet it cannot be doubted that such a union does occur; and perhaps, on consideration, the difficulty of demonstration is not greater than should be expected, when, as Mr. Herbert Spencer says, the communications are "apparently between the branched terminations of the fibres and the ramified processes of the corpuscles." If, then, I am correct in the fact that in the ape the number of the cell branches is less than in man, the conclusion would seem to follow, perforce—that in man there is *a richer intercellular communication* than in the ape. But this conclusion involves others far too momentous to allow of its being arrived at hastily or accepted unconditionally, and therefore it is advisable that the facts and arguments leading up to it should be fairly stated.

And, first, with regard to the facts. In my article, already referred to, on the brain of the Chacma baboon, I stated my belief, as the result of careful examination, that in that ape the branches of the nerve-cells in the third cortical layer were less numerous than those given off from the corresponding human cells. It has been already stated that the same conclusion has been arrived at respecting the large cells of the insula in the specimens of the ape family which have, in the present article, been considered, and notably again with regard to the cells of the third cortical layer. But in expressing my firm belief in the accuracy of the observation thus on two occasions arrived at, I must guard myself against implying that the fact is beyond question, and that it may not possibly be negatived. The subject is full of difficulty. All that can be said is, that I find cells in the human brain with branches far surpassing in number those which, in my experience, come off from the cells in the ape. To state the point more precisely, I have before me at the present moment a human nerve-cell from the cerebral cortex admirably demonstrated by my colleague, Mr. Bevan Lewis, in which the branches are as many as twelve in number. Now, I have never seen this number equalled in the case of the cortical cells in the ape; but nevertheless, having in view the enormous multitude of nerve-cells present, and the impossibility of making a separate examination of each, it is felt that a decided statement on this point should not be made. The endeavour to give an average estimate of the number of cell-branches in any layer has, so far as I am concerned, been a failure, so variable are the cells in this respect, even those of the same layer and in the same section.

Allusion has been made to arguments bearing on the point under discussion—that is to say, evidence which would seem to render it probable, as I have ventured to suggest, that passing from the lower animals upwards towards man there is a progressive increase in the number of the branches of the cortical cells, and, *pari passu*, an increase in the number of the cell connexions.[6] The arguments referred to, and which were founded on the simple state of the cells in the fœtal brain, the paucity of the cell branches in the rabbit and other of the lower animals, and the loss of branches which the cerebral cells undergo in the ordinary degenerative process, need not here be repeated. They would be of little direct value were it not for the difficulty which lies in the way of proving or disproving the theory which they appear to support as to the relation between intellectual power and the multiplicity of cell connexions. They cannot take the place of what is really wanted, and in my search for which I ask the guidance and advice of others—viz., proof positive of the correctness or otherwise of my opinion that in the ape the cell connexions are less numerous than in man.

While the primary object of the present article has been the consideration of the insula in the ape and the structure which the lobe there presents, many of my observations and conclusions have wider range and apply to other parts of the hemisphere, and it is thus more especially with respect to those two important questions concerning the cortical cells, the consideration of which has been just concluded. In the ape, as in man, the nerve-cells of the insula appear smaller than in the convolutions of the vertex, but this is the only minute structural difference which has been detected in the two situations.

I venture to recommend the foregoing observations, more especially with regard to the state of development of the nerve-cells and the number of their connexions, in the ape, to the judgment of those who may have been content to estimate the difference between the brain of man and of the ape as one of quantity merely, and to argue accordingly; of those who, while acknowledging the extraordinary structural resemblance present in both instances, have still refused to admit, on physiological grounds, identity of structure; and, lastly, of those to whom there has been given the leisure and the opportunity for engaging in the study of the comparative structure of the brain.

[5] Maudsley's Physiology and Pathology of Mind, 2nd ed., p. 93.
[6] On the brain of the Chacma baboon, loc. cit., p. 611.

SOME

OPERATIONS PERFORMED SUCCESSFULLY ON AGED PERSONS.

BY JOHN EWENS, L.R.C.P. & L.R.C.S. ED., L.S.A.,
MEDICAL OFFICER TO THE BRISTOL HOSPITAL FOR SICK CHILDREN, ETC.

THE interesting case reported by Dr. Ferguson in THE LANCET of March 11th, 1876, is of the highest importance, as indicating the power of bearing severe operations by some persons in advanced life, and as being calculated to disturb a very prevalent impression that, as a rule, it is better to allow old people to bear as best they may the pain and inconvenience of cancerous and other tumours, rather than risk an operation. I have seen so many cases of persons dying a miserable death from cancer, whose very tenacity of life and power of bearing pain evidenced most remarkably that if the chance had been afforded them they would have well borne an operation, unfortunately not performed in consequence of the hesitation of the patient, endorsed by the doubt expressed by the surgeon as to whether, after all, the operation could be borne, or would materially, if successful, prolong life, that I consider every case of the kind is well worthy of record. Dr. Ferguson's case, although uncommon, is not unique; and I am happy in being able to record others which will confirm his observations, and, I trust, lead to a fuller examination of the subject, and thus be instrumental in relieving some other aged sufferers of painful diseases.

Two of the cases I refer to have been already recorded in THE LANCET;[1] and as both patients, at the time of writing this article, are still in existence, I think the operations, after respectively eight and four years, may be ranked as decidedly successful. As doubtless the papers are within reach of most of the readers of THE LANCET, I will not enlarge upon them further than to say that both were cases of complete removal of the whole of the lower lip for epithelioma, with restoration of a new lip by cheiloplastic operation, and therefore necessarily of a protracted nature. The patients were aged respectively seventy-five and sixty-five, though the latter looked much older.

[1] August 1st, 1868, and February 22nd, 1873.

The other cases referred to are as follows:—

J. W——, aged seventy-eight, had for some years suffered from an irritable wart on the left cheek, which eventually manifested itself as epithelial cancer, about seven inches in circumference when he came under my observation, and was fast wearing out the old man with pain and discharge. He readily consented to the operation, which presented no difficulties, but left a most formidable wound, the whole of the diseased tissues being removed, very close to the bone. The wound was dressed with carbolised oil, and very speedily healed. The patient enjoyed very fair health for four years, no relapse of the disease occurred, and he died of bronchitis, at the age of eighty-two years, having repeatedly expressed his gratification at the result of the operation.

About two years since, a woman, in her eighty-seventh year, who had for more than a year been suffering from epithelioma of the forefinger, originating, it is believed, in a wart which she cut or scratched in peeling potatoes, came under treatment, for severe hæmorrhage, which threatened her life, and recurred from time to time. On the true state of affairs being explained to her, and being told that removal was the only remedy, she readily assented, and would barely allow me time to get the assistance of a medical friend. Accordingly the finger, which was in a most disorganised condition both as regards bone and soft parts, was removed, with a considerable portion of the metacarpal bone. The wound was brought together with several silk sutures steeped in carbolic oil, with which the wound was subsequently dressed, and union by first intention occurred, with the exception of a very minute point, and in less than ten days the woman was perfectly well, no untoward symptoms occurring.

Chloroform was administered in both these cases, and borne very well. The old woman also presented another very remarkable exception to the rule, that persons of intemperate habits do not bear operations well, for she had been an habitual tippler, of anything she could get hold of in the way of intoxicating liquors, all her life, and I am very sorry to say that she has not given up her bad habit even now, but when I last heard of her, about three months since, she was living and quite well.

Doubtless similar cases have often occurred in the practice of other surgeons, and I record these, without further note or comment, as an encouragement to many who may be hesitating as to undertaking operations on persons aged, but otherwise possessing the constitution so graphically described by Sir James Paget, and as quoted by Dr. Ferguson in the concluding portion of his interesting communication.

Clifton.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

LYMPHADENOMA OF THE PELVIS; HÆMATURIA; TRANSFUSION; DEATH THREE DAYS SUBSEQUENTLY.

(Under the care of Mr. SYDNEY JONES.)

E. T. C——, aged twelve, was admitted into Albert ward on April 16th, 1877. He stated that he was quite well until one month ago, when he was kicked in the perineum by another boy. He suffered no pain at the time, but two or three days afterwards pain of a dull, heavy character gradually came on, which was worse at night and on sitting down; this interference with sitting was the first thing noticed by the mother. There was no pain on defecation, but the pain kept him awake more or less. The swelling first appeared, about a week after the pain, as a hard lump the size of a hazel-nut, situated in the middle line behind the anus, but it was never tender at any time; this increased in size until, on admission, it occupied the whole breadth of the perineum, extending from about half an inch in front of the anus to the tip of the coccyx. There was no history of any tumours in the family.

On April 17th the boy was examined by Mr. Sydney Jones under chloroform. The rectum was surrounded, except in front, by a hard, smooth, new growth. The upper limit could be felt at the extremity of the forefinger as a rounded, defined ridge. The coccyx moved with the tumour. The abdomen was very thin, allowing the spinal column to be felt easily. Ordered twenty drops of the syrup of the iodide of iron twice a day.

May 5th.—The skin covering the tumour was of a dark-red colour. Complained of much pain in his back. Motions passed involuntarily.

6th.—Subconjunctival hæmorrhage in right eye.

8th.—Rectum again examined under chloroform, and tumour found to have increased considerably in size, having encroached more upon the rectum, so that the finger was very tightly grasped. Upper limit could only be reached with difficulty. An enlarged gland discovered in the right groin, very large and prominent. (A slight trace of this was felt on April 17th.) The abdomen was found to be extremely tense, due to a distended bladder. Urine drawn off by catheter. Mr. Jones thought that patient's countenance suggested hæmorrhagic diathesis.

11th.—On the patient attempting to get up, it was found he could not stand; his legs gave way under him, and he had to be carried back to bed. When in bed he could draw up both his legs, but complained of much pain in the left leg, and also of a feeling of pins-and-needles. On examination, a dark-blue mottled patch (hæmorrhagic) was observed on the outer side of the thigh, extending nearly its whole length. Ordered morphia injection. The mother stated that his father is subject to epistaxis.

Although catheterism had been necessary for the last week, on the 14th water was passed freely. A prominence was discovered over the first or second sacral vertebra, and a spot of extravasated blood over it. He complained of feeling unable to move his legs; he could, however, draw them up, but seemed to have lost a great deal of control over them, so that the last part of flexing his thighs was apparently quite passive, the thighs falling helplessly on to the abdomen. The left leg was bandaged from the foot upwards.

15th.—Patient looked worse, and extremely anæmic. No further retention; abdomen tympanitic. Motions passed involuntarily up to the 11th inst.; voluntarily since. Gland in right groin no larger; five or six small flat round swellings, about the size of peas, discovered this morning lying under, but not adherent to, the skin of abdomen, also one on left thigh. Some hæmorrhage over right tibia, and also a few other spots of hæmorrhage in various places. Loss of control over both legs much more marked. Some œdema of scrotum and feet. It was thought desirable to try the effect of transfusion.

16th.—Seen by Mr. S. Jones with M. Roussel, the latter performing transfusion at 2 P.M. Cephalic vein opened, and about five ounces of healthy blood injected from the median cephalic vein of Mr. Leatham, one of the students. Before the operation respiration and pulse were very rapid; during transfusion the boy complained of being unable to breathe, and the cheeks became more rosy. A small pad of oiled lint was placed over the wound, two harelip pins securing the edges. After operation he was removed to bed, wrapped in blankets, and had hot-water bottles applied. 3.20 to 4 P.M.: More or less rigors. Complaining of feeling cold; no vomiting.—4.15: Temperature in mouth, 98·4° F. After taking some hot tea and brandy he began to get a little warmer, the colour returning gradually to his lips and cheeks. Involuntary passage of fæces; no blood.—4.45: Complained of curious sensations all over, looked frightened, screamed, and tried to throw the bedclothes off, saying he felt so hot. Passed six ounces of urine deeply coloured with blood, uniformly mixed, after which he appeared easier. Respiration rapid.—5 P.M.: Temperature in axilla, 105·4°. Great thirst.—6 P.M.: Perspiring profusely; restless and irritable.—7.15 P.M.: Much cooler; lies quiet and apparently easier; less thirst; lips again blanched. Respiration 48; pulse 108.—8.15 P.M.: Has twice passed urine deeply coloured with blood; motions passed voluntarily.—9 P.M.: Temperature 100·4°.—11 P.M.: Sick for the first time, vomit being of a sour odour, but without bile or blood. Passed a

small quantity of urine, bright-red, but less dark than the last three times.

17th.—Temperature, 9 A.M., 103·2°. Had two rigors very early this morning. Water passed freely, and each time becoming less red. Took some solid meat for dinner. Complained of headache during the morning; restless and irritable at times. Temperature, 10 P.M., 99·2°. Wound dressed, and looks healthy; some oozing through the bandage.

18th.—Temperature 98°, 2 A.M. Slept well, and seems much better altogether. Stronger, but still very anæmic. Vomited twice during the night. Passed water freely without blood, but once had a little discomfort before micturition. Complains of headache, and no appetite. Temperature 98°, 8 P.M. Ordered five drops of tincture of perchloride of iron every six hours. The bandage on left leg, causing him discomfort, was removed.

19th.—Passed a very bad night. About 12, complained of difficulty of breathing. This morning suffering from great dyspnœa: nares dilated; lips livid; countenance dusky. Respiration 58; pulse 120, carotids pulsating forcibly. Had muscular tremors affecting all the muscles of his right leg. Complained of pain all over, especially at the back of his neck and at the lower dorsal region. Wound on arm dressed; edges gaping and bluish-looking. Dyspnœa gradually increased, with great restlessness; screaming with the pain in his back, and died at 12.30 P.M.

Autopsy.—A tumour was found in front and at the sides of the coccyx. The growth presented the ordinary characters of lymphadenoma, consisting of a coarse retiform connective tissue, with small somewhat irregular cells in its meshes. It filled the ischio-rectal fossa, and caused protrusion of the anus and neighbouring skin; from the anus it extended to a point two and a half inches above, where it terminated in a well-defined border; above this the tissues were brawny and infiltrated by a similar growth. The tumour firmly embraced, but was loosely attached to, the rectum. Extending upwards into the abdomen from the tumour was a chain of enlarged glands. On cutting through the muscles lying on the left side of the spine, on a level with the sixth dorsal vertebra, a mass of new growth, about the size of two hazel-nuts, was found; also, on the same level, between the coverings of the cord and the spinal canal, was another mass of new growth. In the walls of the heart were two or three small masses, also spots of ecchymosis. No emboli. Left lung œdematous; right healthy; small extravasations in both. Kidneys anæmic; on the left side straight the tubes were in places filled with blood. Under the mucous lining of the bladder was one spot of extravasated blood about the size of a pea. Ecchymosis in both retinæ, and the anterior part of both hemispheres of brain. Suppuration in both tonsils.

NORTH-EASTERN HOSPITAL FOR CHILDREN

CARCINOMA OF PERITONEUM INVOLVING BLADDER AND SMALL INTESTINE; DEATH.

(Under the care of the late Dr. B. WOODMAN.)

FOR the following notes we are indebted to Mr. H. Greenwood, house-surgeon.

George B——, aged five years, was admitted on May 14th. The mother brought the child, complaining of the following symptoms:—(1) Frequent micturition; (2) pain in the region of the bladder on passing water; (3) a swelling of the lower part of the abdomen that she thought was getting larger. Nothing amiss had been noticed until fourteen days previously, when the pain on passing water first attracted attention.

On admission there was a hard mass, somewhat irregular in contour, occupying the whole of the hypogastric and encroaching upon the right and left inguinal regions. There seemed also to be a smaller mass in the neighbourhood of the umbilicus; but neither of these appeared to have any connexion with the adjoining viscera, as there were clear tympanitic interspaces. There was enlargement of the abdominal veins, some pain on manipulation, and a sense of deep-seated fluctuation. The general appearance was not very cachectic, and the inguinal glands were not enlarged. Urine free from albumen.

The day after admission the temperature rose to 101°, but during the following week it declined, becoming nearly normal. The general health was apparently better, but there was still frequent pain on micturition, referred to the umbilicus and increased by coughing.

On May 23rd, nine days after admission, the patient was seized with vomiting, and greatly increased abdominal pain, commencing in the left inguinal region. The temperature rose to 102°, but declined next morning to 98°. One sixth of a grain of morphia was given hypodermically at night.

On May 24th there was tympanites; the legs were drawn up, and the pulse weak and fluttering, 118. Collapse rapidly supervened. Rupture into peritoneal cavity was diagnosed. Three grains of Dover's powder were ordered every two hours, and at night another hypodermic injection of morphia was given.

On May 25th death occurred at 2 A.M.

Autopsy.—The lungs and heart were quite healthy, the only noticeable point being a large amount of effusion into the pericardium. The chief seat of the disease was situated just above the pubes, and consisted of a cancerous mass (medullary) covering the whole of the hypogastric and inguinal regions, and extending beyond the umbilicus. The lower part of the tumour was inseparably attached to the peritoneal coat of the upper and posterior wall of the bladder, the interior of which was quite healthy. The centre of the mass consisted of a large cavity, containing about 20 oz. of a purulent fluid, with broken-down débris. This was found to have burst into the peritoneal cavity, setting up a fatal peritonitis. The disease had also penetrated about two feet above the cæcum into the small intestine, the interior of which communicated with the cavity of the mass, and its walls were infiltrated with morbid deposit. The pelvis and the ureter of each kidney was enormously dilated, the mass evidently compressing the latter. Both kidneys contained many secondary medullary deposits, but the liver and spleen were quite healthy.

It was afterwards ascertained that the family history was good. The parents have several other children living quite healthy, and there is no history of cancer in the family. The child had always been under bad hygienic conditions.

THE QUEEN'S HOSPITAL, BIRMINGHAM.

A CASE OF DOUBLE UTERUS AND TWO VAGINÆ, COMPLICATED WITH FIBROID TUMOURS AND ABSENCE OF ONE KIDNEY.

(Under the care of Mr. JOHN CLAY.)

FOR the following interesting notes we are indebted to Mr. Hugh W. Thomas, late resident obstetric, now house physician.

Jane E——, aged thirty-seven, unmarried, a laundress, was admitted Oct. 2nd, 1876. She stated that seven years ago she caught cold during a menstrual period, and this circumstance she assigned as the cause of her illness. The catamenia had been normal previously, and her general health remarkably good; but since that time the menstrual flow had been very irregular, often ceasing for five months. The first symptom which attracted her attention was a constant lancinating pain in the left iliac region, which was followed by a swelling in the groin about the size of a walnut. This tumour was noticed to increase just before and during each menstrual period, and for some time seemed entirely to disappear after the period was over. Three years later she observed that the swelling did not subside, as formerly, after menstruation, but was persistent, gradually increasing in size. Four months before admission the growth began to enlarge somewhat rapidly, and this she attributed to lifting the heavy weights incidental to following her occupation. There was no history of cancer. Leucorrhœa had been constant from the onset of her illness. She had incessant headache, incontinence, and sometimes total retention, of urine. These symptoms were more marked previous to each catamenial period. The catamenia were at this time regular and abundant; the urine contained no albumen.

On examining the abdomen, a tumour of firm consistence, about the size of a fœtal head, was felt in the left iliac region; it extended about two inches beyond the middle line, and reached nearly to the umbilicus; was slightly movable, not adherent to the abdominal wall, and felt nodular on its upper and left side. On manipulating the enlargement, very slight movement could be detected at the os uteri. In the right iliac region a smaller, round

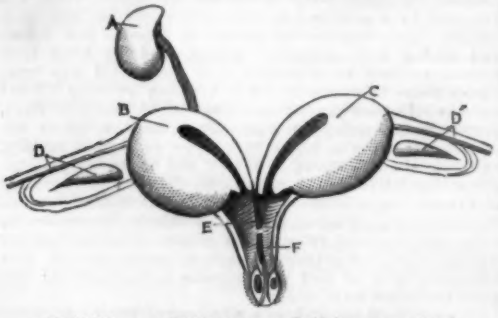
tumour was found, which on palpation conveyed a sense of resistance to the fingers; this was situated deeper in the pelvic cavity, and was less movable than the former. On making a vaginal examination, the os was found to be ill-defined, and pushed upwards and forwards above the symphysis pubis, the vaginal walls being pressed down by a fixed ball-like substance, which was easily felt through the rectum. The two tumours appeared to be distinct, as the moving of one scarcely affected the other. Bowels constipated. Temperature normal; pulse 74.

At a consultation of the medical staff on Oct. 8th it was decided to aspirate the tumours through both the vagina and abdomen; this was done under chloroform, but the growths proved to be solid.

Dysuria was now very distressing, and the patient's general condition was becoming worse daily, so that it was decided, after another consultation on Oct. 14th, to attempt the removal of the vaginal tumour by enucleation.

The patient being placed under the influence of chloroform, Mr. Clay proceeded to make an incision in the vagina, over the most dependent part of the tumour. This was easily reached, but could not be isolated, and all further attempts at removal were abandoned. The vagina was then plugged with carbolised lint, the wound being left open with a view of favouring the descent of the growth. At the time of operation a careful exploration of the tumours was made by the introduction of the hand into the rectum. A small opening into the left labium was also examined, from which a whitish discharge was noticed to exude at a former examination, leading to the suspicion that an abscess existed in that neighbourhood. It was, however, found to be the orifice of a fully developed vagina, closed by a hymen with an elliptical opening, and leading to an indistinctly defined os uteri. The case was now clear that there were two distinct uteri and two vaginæ. The patient rallied well from the operation, but complained of great pain in the vagina and rectum. Fomentations were applied, the right vagina was frequently syringed with Condy's fluid and large doses of opium, together with stimulating remedies, were prescribed. Peritonitis, however, set in rapidly, the temperature ranging between 101° and 103°. The symptoms were uncontrollable, and the patient died on the fourth day after the operation.

Autopsy, twenty-four hours after death.—Abdomen much distended; intestines congested, and presenting all the appearances of commencing peritonitis. A number of small clots were found in the peritoneum. In the abdominal cavity were two tumours, one pyriform in shape, occupying the left side; it had in connexion with it five subperitoneal tumours, about the size of hazel-nuts, which were nodular in character. Occupying the right side of the pelvic cavity was a smaller tumour, globular in form. The weight of both tumours was four pounds and three-quarters. On section they were found to consist of fibrous tissue. The walls of the bladder were thickened and corrugated; the left ureter was small, and obliterated for some distance up; no kidney could be found on that side. The right ureter was much



A, Right kidney. B, Right uterus. C, Left uterus. D D, Ovaries and Fallopian tubes. E, Urethra (bladder removed). F, Vaginæ (right larger than left).

dilated and thickened, the kidney very large, being seven and a half inches in length, three and a half inches in diameter, and weighing eleven and a half ounces. There were two complete vaginæ, having the transverse rugæ well developed in both; the length of the right vagina was five inches, the left four inches. On opening the canals each os was found, and a bougie passed into each uterine cavity with ease; the length from the os being five and three-quarter inches in the left, and five and a half inches in the right, each cavity running along the inner surface of its respective tumour. There were two ovaries, one for each uterus; both uterine cavities communicated with the ovary of its side. The ovaries and all other organs were normal.

MANCHESTER ROYAL INFIRMARY.

CANCEROUS INFILTRATION OF THE TONGUE AND MUCOUS MEMBRANE UNDERNEATH; DISEASED TISSUE REMOVED BY SYME'S OPERATION.

(Under the care of Mr. ASHTON HEATH.)

FOR the notes of the following case we are indebted to Mr. Jones, surgical registrar.

Francis P——, aged fifty-two, a spare man of medium height, was admitted on the 26th of February, 1877. Six months before admission he first felt a soreness beneath the tongue after eating. The pain, which was of a burning lancinating character, rapidly increased. About the same time he detected a hard lump beneath the right side of the tongue, about the size of the tip of his little finger. According to his own expression, it was as hard as a stone. Soon after this he perceived enlarged glands on both sides of the neck, more marked on the right than the left. On admission his expression was anxious, and he complained of pains radiating from the swelling beneath the tongue upwards along the right side of the head. This pain prevented him from eating and sleeping. There was also a constant profuse discharge of saliva. He stated that he lost his teeth, with the exception of about half a dozen, when young and at work as a calico-printer, from what he believed to be the action of nitric acid which is employed in the trade. There was a hard infiltrating ulcerated mass, involving the tip and right side of the tongue and the mucous membrane underneath, but not the gums. He was unable to protrude the tongue beyond the lips. There was constant pain, much increased by the act of mastication. He had been in the habit of smoking a short clay pipe. There was no history of syphilis.

Removal of the tongue having been advised on consultation with the surgical staff, the operation was performed on the 23rd of March. The patient having been placed under the influence of chloroform, and the remaining teeth in the lower jaw removed, the tongue was transfixed with a strong whipcord, and an incision made in the median line through the lower lip and the tissues over the chin to within half an inch of the bijou bone. After the divided coronary artery had been twisted, a hole was drilled through the lower jaw on each side of the symphysis menti, and a silver wire introduced. The lower jaw was then divided with a saw, exactly in the median line, and the infiltrated tissues separated from the inner side of each half. The wire of the galvanic écraseur was next passed round the base of the tongue, the apparatus screwed up and attached to the battery, and the tongue divided in two minutes and a quarter. There was no hæmorrhage of any consequence during the operation, a sublingual twig being the only artery twisted besides the coronary. The stump of the tongue was transfixed with a stout cord, with a view of pulling it forward should bleeding or any difficulty of breathing occur. Happily, they did not. The two halves of the jaw were adjusted, and kept in apposition by the silver wire, and the skin wound was accurately brought together by fine sutures and one hare-lip pin. This pin with the whipcord was removed on the third day after operation, and within five days all the sutures were taken out. The skin wound healed rapidly, except a small part of it beneath the jaw, which continued to discharge for some days.

The general health much improved after the operation. He slept soundly, and completely lost the shooting pains which were so distressing. The stump of the tongue was for some time covered by a whitish slough, which subsequently came away. The diet at first consisted of milk and beef-tea. Towards the end of April he was allowed to have meat. The glands on the right side of the neck

continued enlarged, but those on the left resumed their natural size. On the 9th the patient was able to talk so as to be understood.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting of the Society on Wednesday, July 4th (Dr. West, President, in the chair), Dr. GALABIN showed a Uterus, in the cavity of which suppuration had occurred from occlusion of the cervix, due to cancer. The organ had been punctured. A drainage-tube was afterwards inserted. The patient died with general purulent peritonitis. The specimen was referred to Drs. Roper and Galabin to report upon.

Dr. W. SQUIRE, for Dr. Buckell of Winchester, read the notes of and showed the Viscera of a case in which Cæsarean section was performed twenty to thirty minutes after death. The child was saved. The mother died suddenly of dilatation of the aorta, rendering the aortic valves incompetent. At the post-mortem examination the viscera of the chest and abdomen were found to be transposed.—The PRESIDENT thought the case of interest as showing that a child could be recovered a considerable time after the death of the mother.—Dr. AVELING said that it is believed that a child may be born alive an hour after the mother's death. —Dr. PLAYFAIR said he knew of one case in which a live child was born half an hour after the death of the mother. —Dr. ROUTH said that much depends on the cause of the mother's death. He had performed Cæsarean section in a case of death from apoplexy, but the child was dead from carbonised blood.—Dr. DALY saw Cæsarean section done twenty minutes after rupture of the uterus, but the child was dead.

Dr. PLAYFAIR showed a specimen of Elephantiasis of the Vulva removed by him. It was amputated, and the bleeding vessels tied.

Mr. SPENCER WELLS related the particulars of additional cases of Ovariotomy performed during pregnancy. The author had arranged in a table the details of all the cases in which he had performed ovariotomy during pregnancy. The age of the patient was given, the period of pregnancy when ovariotomy was performed, the weight of the tumour removed, and the results to mothers and children. Full particulars of four cases, hitherto unpublished, were given. The author concluded that as eight of the nine mothers recovered, as pregnancy proceeded in five and living children were born after natural labours, as in two where labour came on soon after ovariotomy there was no unusual hæmorrhage nor difficulty, and as four of the patients had borne children at various periods since the labour which followed the ovariotomy, these facts will have their just influence in the formation of professional opinion upon the best mode of treating cases of pregnancy complicated by ovarian tumour. —Dr. PLAYFAIR asked Mr. Wells what his experience was of tapping and induction of premature labour. Dr. Playfair was in favour of ovariotomy, because of the unfavourable results which followed when labour was allowed to go on with small ovarian tumours.—Dr. MURRAY related a case where he induced labour at the eighth month, and later performed ovariotomy successfully. He thought when the tumour was fluid it was safer to tap; and even if solid, but small, and pregnancy far advanced, labour might take place before the tumour would cause real inconvenience.—The PRESIDENT said that Mr. Wells's results tended to show the comparative safety of ovariotomy during pregnancy. Probably the operation should be done early, for the advance of pregnancy may give rise to suppuration of the cyst, and death. If ovariotomy could not be done owing to the nature of the tumour or other circumstances, premature labour might be induced.—Mr. LAWSON TAIT had in several cases been able to push up small ovarian tumours impeding labour, and had obtained favourable results. He was of opinion that ovariotomy was better practice than the induction of premature labour. He had once performed the operation during pregnancy; miscarriage occurred on the seventh day after, and the woman soon died. The pedicle was found to be gangrenous.—Dr. CARTER had seen two cases of pregnancy with ovarian tumours. Both cases went to the full term, and did well. Children were alive and healthy. He asked Mr. Wells what other cases had he been consulted about which had not been operated upon.—Dr. GALABIN asked if Mr. Wells attached any importance, in making the choice of operation, to the stage of pregnancy reached. In the cases tabulated miscarriage had occurred in all in which ovariotomy had been performed later than the fourth month, but in none of the others. If this were confirmed it would seem preferable at such a stage to induce premature labour, and not to delay ovariotomy if indicated in the earlier months.—Dr. HEYWOOD SMITH asked if rapidity of growth influenced Mr. Wells in his choice of operation. He considered that any operation was extremely dangerous during the puerperal state, and for two months after delivery. Tapping might be dangerous, especially if cysts were forming rapidly, for fluid might escape and set up inflammatory mischief. — Dr. ROUTH thought that observation of more cases was required before an opinion could be formed on the subject before the Society. Seven cases had been mentioned that evening which ran natural courses without any interference. Dr. Routh had brought on premature labour successfully and performed ovariotomy three months afterwards, but the patient died. Much depended on the size and rapidity of growth of the tumour.—Dr. CHAMBERS had seen a case of ovarian tumour associated with pregnancy. He tapped. A few days after abortion took place at the fourth month. She recovered from the miscarriage and tapping, but the tumour began to grow again, and the patient to lose health. The tumour was removed in about six weeks from the tapping, but the patient died. He thought that had ovariotomy been performed instead of tapping the patient would have had a better chance of recovery.—Dr. SAVAGE saw no chance of obtaining a rule of practice in these cases from the present discussion. He asked if Mr. Wells would operate in a case of pregnancy complicated by a solid or cystic ovarian tumour when there was no suffering, and what operation would he choose if the patient suffered seriously. Dr. Savage thought ovariotomy was the only justifiable operation in the latter circumstances. — Dr. ROPER induced labour at seventh month in a case complicated by an ovarian tumour as large as a fœtal head. The child was alive; patient did well, and has had living children at full term since, the tumour remaining unaltered.—Mr. SCOTT said the propriety of performing ovariotomy during pregnancy depended mainly on two conditions—the amount of suffering and constitutional disturbance present, and the position of the tumour. If the tumour were wedged in the pelvis so as to impede delivery early ovariotomy should be performed. If the tumour were well up in the abdomen, giving rise to no trouble, it may be doubted if operative interference be justifiable. — Mr. WELLS said the patient and her friends had an undoubted right to share in the discussion, and it was often not only advisable but right to give them some share of the responsibility when the decision involved a matter of life or death. He thought that to remove the fœtus, and soon afterwards to remove the tumour, was extremely dangerous, for the puerperal state was not favourable to operations. It was necessary to observe more cases to answer some questions. It is probable that early is preferable to late operation. If the tumour could not be reduced by tapping, and the woman was not suffering, the clear course was to leave her alone. Cases had gone on to term, and living children had been born, but the tumour still remained, and caused anxiety and suffering.

BEQUESTS, &c., TO MEDICAL CHARITIES. — Mr. James Hedgman, of Barnes, bequeathed £3000 to the West London Hospital, Hammersmith. Mr. Henry Booth, of Dalston-lane, Hackney, bequeathed £1000 New Three per Cent. Annuities, each, to the German Hospital, the Royal London Ophthalmic Hospital, and the City of London Hospital for Diseases of the Chest. Admiral the Hon. Henry John Rous bequeathed £500 to the Leeds Infirmary, £ 00 to the Doncaster Infirmary, and £200 to the York County Hospital. Mr. George Cubitt, M.P., has given £100 to the reparation fund of the Westminster Hospital. The Great Northern Hospital has received £100 under the will of Mr. Thomas Lewin.

REPORT
ON
ICE-MAKING MACHINES.

DURING the last few years ice has become almost as essential in medical practice as quinine or chloroform. Fortunately its domestic consumption has at the same time increased so rapidly that it has come to be regarded as a necessary of life. It is now an article of enormous sale, and can be procured at a cheap rate in every large town. In the country, however, things are different. Ice is often difficult to procure, especially at short notice; and hence it has happened, as usual, that the resources of art have been called in to remedy the shortcomings of nature. The success has been remarkable, and the making of ice by machinery is now carried on, not only on the small scale in private houses, but also in tons by manufacturers, even in the heart of London.

We have recently inspected most of these curious applications of science, and have found them so interesting that we propose in this report to describe them, as they seem to be less known than they deserve to be.

When any solid becomes liquid, heat is consumed, and the same quantity of heat is evolved when the liquid passes back to the solid state. The heat concerned in this change of state is called the "latent heat" of the liquid. When ice is mixed with common salt, the ice rapidly liquefies, and the heat required to melt it is taken from the mixture itself and from whatever is in contact with it. The simplest of freezing mixtures is, therefore, a mixture of ice and salt, which produces a cold of $-5°$ F. By substituting crystallised chloride of calcium for salt, a cold of $-50°$ can be attained, at which temperature mercury is a solid. Even without ice, very intense cold can be produced by the mere solution of salts in water. "Freezing powders" are now prepared for this purpose, and sold in very large quantities. They are cheap, and only require the addition of water to solidify water immersed in them in a few minutes.

Many machines have from time to time been introduced for the manufacture of water and cream ices by means of these freezing mixtures. Of these the two latest appear to us decidedly superior to all others. One of them, which was shown to us by the Wenham Lake Ice Company, 125, Strand, is a perfect model of simplicity and efficiency. It consists of a double drum mounted by a central swivel on a stand, like a cannon, but capable of complete rotation. The central core of the drum contains the material to be frozen, strawberry-cream or lemon-syrup, or pure water. The circumference of the drum contains the freezing mixture—ice and salt, if ice can be procured, or freezing-powder and water. The two ends are screwed down, and the drum turned over and over for about three minutes. Then the ice is made, and can be turned out or left in the mixture for an hour or more as required. If pure water has been used, a hard fluted shell of ice like a glass vase is obtained, and this may be placed on the dinner-table or broken up for use in the sick-room. The value of the machine when ice is wanted in a hurry is evident.

Somewhat similar is the machine sold by the "Piston Freezing Machine and Ice Company," 314, Oxford street. In this the drum is stationary and vertical, while the freezing mixture and substance to be frozen are simultaneously agitated by the vertical movement of a piston. The apparatus is, in fact, like a barrel churn, and yields good ice in three minutes with but little labour. It is, however, we think, scarcely equal to the rotatory machine described above. The great advantage of these machines is that, the surface exposed to the freezing mixture being large, the ice is formed very quickly and with little manual exertion.

As cold is produced during the liquefaction of a solid, so is it produced during the evaporation of a liquid. The conversion of water into steam requires, as everyone knows, a large quantity of heat, and this heat, inasmuch as it reappears during the condensation of the steam, is commonly called the "latent heat" of the steam. The cold produced by the evaporation of ether and other volatile liquids is due to this cause, and it is scarcely necessary to refer to the many familiar instances of the utilisation of the principle in refrigeration which occur in common life. But of late years systematic attempts have been made with varying success to produce ice on the large as well as on the small scale by rapid evaporation, and at last real success seems to have been attained. One machine, that of Carré, which depends on the alternate evaporation and condensation of liquefied ammonia-gas, has been described so often that it is unnecessary to refer to it again. But this is not the case with another of M. Carré's inventions, which is so exceedingly ingenious as to merit notice if only for its scientific interest. It consists of a small but powerful air-pump worked by a vertical lever. This communicates below with a chamber containing a few pounds of strong sulphuric acid, and above with a copper tube, which forks into two open ends. These ends turn downwards, and pass through two indiarubber corks. Strong glass decanters are half filled with water, and fitted to the india-rubber corks. The pump is then worked steadily. A vacuum is produced in the upper part of the decanters, the vapour from the water being rapidly pumped away and absorbed by the sulphuric acid below. In a minute or two the water in the decanters boils, and in less than three minutes it *freezes*, the boiling and the freezing actually going on together. We saw the machine tried on the premises of Messrs. Davenport and Co., 99, High Holborn, on a fearfully hot day at a minute's notice, and can testify that ice really began to form in the decanters two minutes and a half after the pump began to work. In five minutes the decanter contained a solid block of ice.

The sulphuric acid is of course very cheap, and can be procured everywhere. The same charge can be used, we understand, fifty or sixty times, and can easily be reconcentrated by evaporation, if necessary. The chief use of this machine is for the production of iced water and other cool drinks. It is, however, easy to replace the decanter by a bowl, and in this way to obtain a block of ice that can be detached and placed on the table. The value of the machine in places where ice is difficult to procure can hardly be over-estimated.

We come now to the machines for the production of ice on the large scale. One of these, made by Messrs. Davenport and Co., 99, High Holborn, is now worked by Mr. Robert Skene, 61, High-street, Bloomsbury, by whom we were permitted to inspect it. A cistern, somewhat like a tubular boiler, contains some ether, which is the refrigerating agent. The vapour escaping from the ether is pumped by a double-action air-pump into a condenser surrounded by cold water. Hence the ether, now once more liquid, flows back to the cistern. The evaporation of the ether causes the cistern to become intensely cold, and this cold is rapidly communicated to a strong solution of common salt, in which the cistern is immersed. The very cold brine so obtained is caused to circulate through the flat, hollow, and vertical partitions of tinned copper in a tank filled with pure water. Ice quickly forms in smooth slabs on the partitions, and is from time to time removed as the slabs acquire the requisite thickness. The ice so obtained is of course exceedingly pure, and is said to waste less and cost less than that imported from abroad. In this machine the ether is condensed again and again with scarcely any loss, and the only expenses after the original outlay are, therefore, for rent, coals, and labour. It is interesting to observe that the ice is really produced by the burning of coal. The brine merely acts as a carrier of heat from the water to the refrigerator.

A somewhat similar machine has been patented by Mr. Reece. Liquefied ammonia gas is in this case the refrigerating agent, but we cannot speak of its success, as we have not seen the apparatus at work.

It only remains to speak of the very ingenious modifications made use of by Mr. John Gamgee. On a former occasion we gave a somewhat detailed account of the real ice rink which, even in the hottest weather, provides skaters with a splendid sheet of ice for their graceful and healthy amusement. The chief differences between Mr. Gamgee's machine and the one we have described above are that liquefied sulphurous acid is used instead of ether and a mixture of glycerine and water instead of brine. Both

appear to be distinct improvements, and there can at any rate be no doubt of the thorough efficiency of the apparatus.

It is obvious that these machines can be used for other purposes besides the production of cheap and pure ice. They are employed by brewers with satisfactory results, and are well adapted for the preservation of meat, fish, and milk. The chemical manufacturer will, no doubt, find them valuable aids to crystallisation and condensation, often in hot weather difficult operations, and many other probable applications suggest themselves to the mind. Refrigeration is, indeed, still in its infancy, as far as applications go, and we may look forward to many valuable developments, now that the process of cooling has become so easy and so cheap.

INTERNATIONAL MEDICAL CONGRESS AT GENEVA.

THE programme of the forthcoming International Medical Congress, to be held in Geneva, under the presidency of Dr. Carl Vogt, from the 9th to the 15th September, has been published. It is largely composed of abstracts of the papers to be read before the various sections, and is printed both in the French and German languages. The sections are seven in number, and the meeting is so arranged that each section will meet daily in the morning, the afternoons being devoted to general meetings of the Congress. The following is a brief summary of the subjects which will come on for discussion:—

SECTION I: *Medicine*.—President, Dr. Stroehlin. A paper will be read by Dr. Ch. Bouchard, of Paris, on the Etiology of Typhoid Fever, in which the author will invite the production of new facts as to the communicability of the disease, and the time and conditions favourable to the development and propagation of the poison by means of the dejections. He will call attention to the dissemination of the typhoid poison by air and water, and especially to the influences exerted by sewer-gas upon the health of workers in sewers. With regard to the dissemination by water he will give instances of the impregnation of streams and wells, and inquire into the agency of subsoil water in the propagation of the disease.—Prof. Lebert, of Breslau, will contribute some observations upon Simple Chronic Ulcer of the Stomach, founded upon 252 cases under his own care. He gives the average mortality from gastric ulcer as four per cent., and details no fewer than seven different clinical varieties. The paper then analyses the symptomatology of the affection; hæmatemesis occurring in four-fifths of the cases, and proving the cause of death in three per cent. He attributes the mean duration, even of favourable cases, to be from three to five years, and states that a fatal issue is more common the longer the disease lasts. Other matters are discussed, such as the recurrence and the production of fistula and the relations to cancer; and the paper ends with a section on treatment, in which milk diet plays a prominent part.—Dr. Revilliod, of Geneva, will read a paper on Diphtheria, Croup, and Tracheotomy, in which he will advocate the unity theory, holding that clinical facts do not warrant any separation between croup and diphtheria, since intermediate degrees between them may be observed both as to the extent of the local lesions and the general disturbance, and since both the affections are developed in the same epidemic, and under the influence of the same contagion. He points out that diphtheria is endemic in towns and epidemic in country districts, and that it is more fatal in the former than the latter; that there is no specific against the disease; and that tracheotomy is the only means available for croup "of the third degree," and should be then invariably performed. He gives a proportion of two-fifths as the number of recoveries after operation. He believes the cause of death after tracheotomy to be due to disorder of the pulmonary innervation.—Prof. Gille, of Brussels, reports upon the question of a Universal Pharmacopœia, with a view to hasten the action of the committee appointed by the Brussels Congress in 1875, and to press upon the Russian Government to follow out the recommendations of the International Pharmaceutical Congress held at St. Petersburg in 1874.—Other communications to this section are: Parasitic Affections of the Skin, by Dr. Hardy, of Paris; the Inoculability of Various Cutaneous Diseases (impetigo, herpes, epidemic pemphigus of the new-born), by Dr. Vidal, of Paris; and on the Ophthalmoscopic Diagnosis of Meningitis, by Dr. Bouchut, of Paris.

SECTION II.: *Surgery*.—President, Dr. Mayor. A paper upon Artificial Ischæmia will be read by Prof. Esmarch, of Kiel, in which he sums up the advantages and disadvantages of the procedure associated with his name. An elaborate paper is supplied by M. Verneuil, of Paris, upon the Reciprocal Influence of Traumatisms upon Pregnancy, a paper which is now in course of publication in the *Revue Mensuelle*. Dr. Rouge of Lausanne, reads upon the Treatment of Ozæna; Dr. Julliard, of Geneva, upon Galvano-cauterisation, detailing the instruments necessary for its performance, and the cases in which this method is applicable. Dr. Ollier contributes some "Final Results upon Articular Resections;" Dr. Reverdin, of Geneva, upon Penile Fistula; and an anonymous contributor supplies a paper on Transport of the Wounded.

SECTION III: *Gynæcology and Midwifery*.—President, Dr. Gautier. Papers will be read upon Artificial Feeding of Infants, by Dr. Zweifel, of Erlangen; on the Employment of Anæsthetics in Natural Labour, by Dr. Piachaud; and on Membranous Dysmenorrhœa by Dr. Gautier. The latter compares membranous dysmenorrhœa with ichthyosis of the skin or of the lingual mucous membrane; and advocates dilatation and incision of cervix uteri previous to the employment of topical remedies applied to the uterine mucous membrine. Dr. Rapin, of Lausanne, contributes a paper on the Uterine Souffle; and Dr. Odier, of Geneva, upon the Law of Growth in Infancy, and its Physiological and Palothogical Deviations.

SECTION IV: *Public Medicine*.—President, Dr. Lombard. Dr. Magnan, of Paris, reads a paper upon the Influence of Alcoholism on Mental Diseases, in which he maintains that alcoholism may lead to general paralysis, and that alcoholic insanity is distinct from other forms. Dr. Lombard discusses the question of medical geography with especial reference to malaria in Europe and in America; and Dr. Dunant, also of Geneva, reads a paper upon the Influence of Immigration of Country Population into Towns. The question of the Climatic Treatment of Tuberculosis is dealt with by Dr. Thaon, of Nice, in which he advocates mountain districts as summer resorts and the Mediterranean coast for the winter. The question of the adulteration of alcoholic beverages, as affecting the health of the manufacturers and consumers, is dealt with by Dr. Guillaume, of Neufchatel; that of Epidemics by Professor Diday, of Lyons; and Hydro-therapeutics by Dr. Glatz, of Geneva.

SECTION V.—*Biology* is presided over by Professor Schiff. Papers will be read by Dr. Marey on the Electric Discharge of the Torpedo Eel, and its Physiological Analogies to Muscular Contraction; by Dr. Broadbent, of London, upon Cerebral Localisations. A full summary is given of Dr. Broadbent's paper, which is divided into two parts—the first dealing with the motor zone of the cerebral cortex, and the second with the corpora opto-striata. Dr. Preyer, of Jena, will read a paper on the Cause of Sleep, which he attributes to the diminution in supply of oxygen to the brain, from the presence in the blood of waste products of nervous and muscular force, such as lactic acid and creatin; these become oxidised during sleep, which ceases on their oxidation being completed. Prof. Schiff has a paper upon the Functions of the Spleen, in which he dispels the theory of its being a blood-forming gland, and argues in favour of its acting as a digestive organ, supplying a special ferment which, conveyed by the blood to the pancreas, gives to the secretion of the latter the property of digesting albuminoid bodies. Dr. Ful, of Geneva, reads a paper upon the Histology of the Ovum, and the Rôle of the Zoosperm in Fecundation; Dr. Prévost, one on Physiological Antagonism; Dr. C. Vogt, upon Human Eutocus; Dr. Zahn, on the Destination of Tissues implanted in the Organism.

SECTION VI. is devoted to *Ophthalmology and Otology*. The president is Dr. Warlomont, of Brussels, who contributes a paper upon the Indications for Enucleation of the Eyeball, with reference to Sympathetic Ophthalmia; Dr. Haltenhorff, of Geneva, one on the Etiology and Prophylaxis of Myopia; and Dr. Colladon, of Geneva, upon Tenotomy of the Tensor Tympani.

SECTION VII. is devoted to the exhibition of *New Apparatus and Inventions.*

It will be seen that the papers to be read before the Congress embrace many subjects of great interest; and there is good hope of their being very fully discussed, since so many of them are presented in abstract in the programme before us. The meeting will doubtless be well attended, and promises to be very successful.

ON AN OUTBREAK OF RELAPSING FEVER IN THE CITY OF BOMBAY.

THE occurrence of a prevalent and apparently specific fever in the city of Bombay has recently afforded a problem of considerable interest to epidemiologists, inasmuch as carefully conducted observations on the earlier appearances of any disease in a new field cannot but throw some light on the natural history of disease. And it would seem that such an opportunity has just offered itself, and has been turned to some account.

As a consequence of the widespread scarcity, if not famine, which, as a result of the failure of the monsoon rains of last year, is now causing so much anxiety to the Governments of Bombay and Madras, large numbers of poverty-stricken people have flocked into the already overcrowded city of Bombay, and, gravitating into the worst and most unhealthy portions of the city, have, by increasing largely the population per square mile, set up those conditions which in every part of the world, under like circumstances, give rise to epidemic disease.

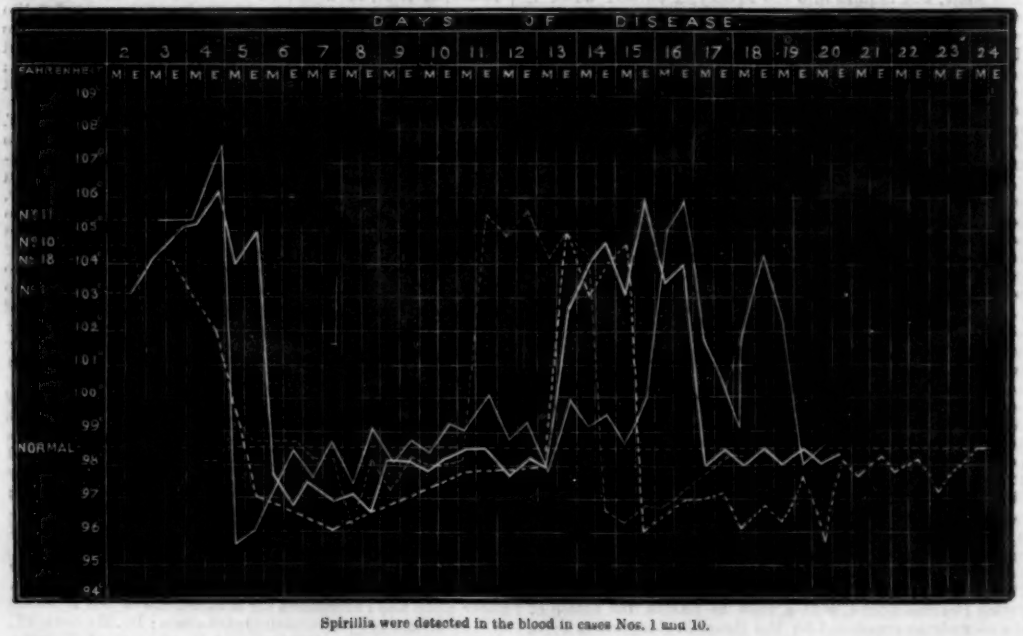
Early in March the health officer, Dr. Weir, called the attention of the Town Council to the rapidly rising death-rate, which he attributed to the influx of immigrants from the famine districts, which resulted in an inquiry being instituted, when it was ascertained that from 12,000 to 16,000 people had entered the city from the Mofussil during the previous five or six months. The condition of many of these was deplorable. Three or more families were found crowded into single rooms, with little light and less air, suffering, in many instances, from insufficient food, and stricken with a fever which had already proved unusually fatal. The death-rate in these and the following weeks rose from 26, the ordinary mortality of this season of the year, to upwards of 66 per 1000, and it was obvious that some steps were absolutely necessary to remedy this state of things. Accordingly, the Town Council determined on forming a temporary camp on the "flats" outside the city, and deporting, so far as might be possible, the sick from the worst divisions of the town.

The formation of this camp afforded an opportunity of scientifically investigating the character of the fever which prevailed, as already some medical officers of Bombay had hazarded an opinion that the fever was not of the usual malarial character ordinarily prevalent in the town. Under the orders of the Surgeon-General, who was acting by direction of the Government, Dr. Henry Cook, first physician of the Medical College Hospital, and Dr. Vandyke Carter, surgeon of the Goculdass Hospital, were directed to form a committee to investigate into the character and causes of the fever, and a ward of twenty-five beds was set apart for the reception of the more typical cases.

The committee commenced their observations on the 6th April, and concluded them on the 27th. The cases were carefully watched, and the temperature noted twice daily. It soon became apparent that the course of the disease in the majority of the cases differed materially from that of either intermittent or remittent fever; and although the difficulty in obtaining a succinct history from the patients or their friends, and the shortness of the period of observation, were elements of uncertainty, the general outline of the majority of the cases bore so remarkable a resemblance in their more prominent points to those of relapsing fever, that the identity may, we venture to think, be considered established.

We here give a transcript of four of the temperature charts which may be considered typical. The sudden fall after a more or less determined period of high temperature, the succeeding period of low or normal temperature running from five to eight days, and the well-marked relapse, are here clearly shown.

Record of Temperature of Four Cases of Fever.



Spirillia were detected in the blood in cases Nos. 1 and 10.

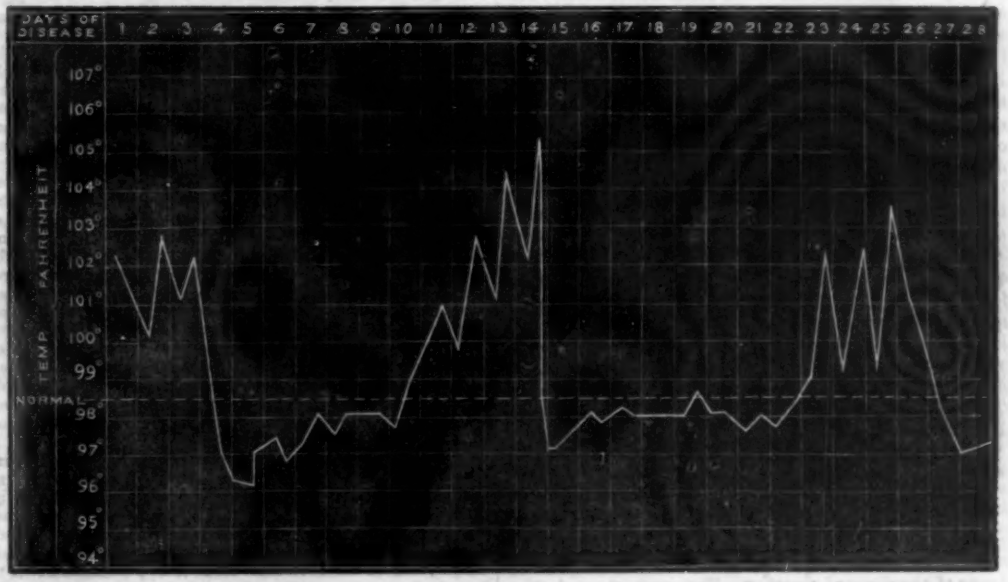
Our readers will remember the highly interesting discovery of Obermeier in 1872, during the epidemic of relapsing fever in Berlin, of a peculiar microscopic organism in the blood. The observation was repeated by other

observers in succeeding epidemics on the continent, amongst whom were Siegel, Weisert, and Cohn; and the organism was denominated by the latter the "spirillium febris recurrentis," and by many is looked upon as pathognomonic of relapsing fever. The presence or absence of this organism in the blood of those suffering from the peculiar form of fever was therefore a matter of great moment, and to the microscopical investigation much importance was attributed by the committee. Dr. V. Carter accordingly undertook the search, and was rewarded by finding the microzoon in five of the cases, which in other chief points also resembled relapsing fever. Of these cases, Nos. 1 and 10 are given in the chart above.

Several important questions are suggested by these facts. Although this is perhaps the first occasion on which a fever bearing so close a resemblance to the relapsing fever of Europe that but little doubt will be left in the minds of many that they are identical has been officially recognised in India, is there reason to think that the disease may have existed there unrecognised? The close resemblance between the febrile phenomena of some forms of malarial remittent and those of the recurring type renders the diagnosis one of much difficulty. Drs. Twining, Morehead, Peet, and others have noted cases of this kind, but have not considered them typical of recurring fever. Dr. Murchison has, on the other hand, authoritatively asserted that "no form of tropical remittent fever was ever observed where the febrile paroxysm lasted almost continuously for four or seven days, was then followed by a complete intermission of a week, and afterwards, with tolerable regularity on a certain day, by a return of the fever for three or five days." Instances have frequently been recorded where malarial fever was characterised by relapses. Dr. Arnott, in 1849, notes this especially in his account of the fever ("epidemic") in Peshawur: "Relapses," he states, "were frequent, and gave much trouble." Dr. Lyell, in 1852, met with a fever which he thought closely resembled "relapsing," and which he believed was contagious. Dr. Smith, in the first report of the Sanitary Commissioner for Bengal in 1868, reports a contagious fever with relapses. During the famine in Orissa in 1866, Mr. Chand Dutt found relapses to be very common in the fever which attacked those suffering from scarcity of food. Dr. A. Garden, in his account of the fevers which prevailed in the Sharanpore districts, records relapses as forming the rule rather than the exception. He states: "After an irregular interval of from four to fifteen or twenty days, there occurs a relapse. In a large number of cases, the interval is four days, and so regular did this appear at one time that I fancied this might be the law—in fact, that it was a regular relapsing fever; but more careful examination showed that in a larger proportion of cases the interval is from four to twenty-one days." Doubtless, many more instances might be quoted, but the cases here cited are sufficient to show the frequency of relapse in the forms of fever met with in India, but are not sufficiently precise to afford data for forming an opinion on so important a matter as the existence of a true relapsing fever.

In September of last year a case occurred in the clinical wards of the Jamsetjee Hospital, in Bombay, under the care of Dr. Cook, which bore so strong a resemblance to true relapsing fever that it suggested to the mind of that gentleman the probability of its being an instance of this disease, and was quoted to the clinical class by him as being almost a typical one. We give below a tracing of the temperature chart. The chart (No. 2) shows the occurrence of the

Record of Temperature—Case of J. M. D——, Sept. 8th, 1876.



first attack; its sudden subsidence; an intermission of six days, followed by the first relapse, lasting four days; a sudden fall, succeeded by a second period of intermission, lasting eight days, and a second well-marked relapse. In both relapses the rise of a degree immediately before the sudden critical fall of temperature, which was so generally noted in the epidemics of relapsing fever on the continent and elsewhere, is clearly shown. Other symptoms bore also a resemblance to those of the specific fever; such as the profuse critical sweat, the fall of temperature on each occasion a degree or two below the normal line, the occurrence of well-marked muscular pains and of an icteroid condition of skin and conjunctiva, and the complete absence of febrile symptoms during the period of intermission. None, indeed, of these are rare in true cases of malarial fever, but, taken together with the outline of the thermal chart, are more than suggestive.

The forms of malarial fever as they occur in tropical climates are so many and varied on the one hand, and the variations in the less typical cases of the specific fever are sufficiently numerous, on the other, to render a diagnosis oftentimes doubtful. Indeed, so subtle may be the distinctions that it may raise the question, Are there any truly pathognomonic signs? Is the occurrence of the spirillium one? Is, again, relapsing fever necessarily contagious under all circumstances? Does its contagiousness afford a distinctive indication? May malarial fever, under conditions of overcrowding, filth, and famine, develop into something which cannot be distinguished from true relapsing fever? These and many other questions of like difficulty will arise

in the minds of thoughtful observers, and suggest how wide a field for careful and thorough observation is opened in India by the work just now carried out by the committee in Bombay.

DR. LEWIS A. SAYRE'S TREATMENT OF SPINAL CURVATURE.

IN accordance with our promise of last week we proceed to give our readers some account of the principal points insisted on by Dr. Sayre in his forcible expositions of the pathology, diagnosis, and treatment of spinal curvature.

Dr. Sayre, we may premise, is of opinion that in nearly all cases of acute curvature there is a history of injury received. The injury may have been slight and little noticed, but it is rarely entirely absent, and proof of it will generally be found if looked for. That the disease has an essentially strumous origin he denies, while admitting, of course, that a slighter injury will suffice to start it in a child of strumous diathesis than in another, and that it will be more likely to go on acutely.

Further, Dr. Sayre impresses upon all who hear him the importance of studying the earlier symptoms of this disease, sometimes obscure and unsuggestive. They consist for the most part in pains, irritation, disordered function at parts corresponding with the terminal extremity of the nerves emanating from the portion of the spine diseased. If the cervical portion of the spine be affected, there may be pain in the neck, dysphagia, irritation of the larynx, &c.; if the dorsal portion, pains in the course of the dorsal nerves, contraction of the body, indigestion, &c.; if a lower portion still, there will be similar symptoms, with perhaps irritation of the bladder and rectum, flatulence, and constipation. He holds it a pitiable thing to allow the disease to advance till the "knuckle" of the spine is to be seen. Early care should be taken to detect tenderness, not only by pressure over the spines of the vertebræ, which may not cause tenderness if the disease is in the anterior portion of the bodies, but by pressing the heads of the ribs back upon their facets, or by pressing together the head and the sacrum, gently of course.

The great object of Dr. Sayre's treatment of diseased spine is to give rest or fixity to the diseased part, and so to localise the rest that the general locomotion of the patient may not be interfered with. If his plaster-of-Paris bandage is happily applied the patient soon finds his feet, and even ventures to jump in a way and with an expression that shows that the diseased spots are protected from pressure. This was strikingly shown in the case of a little girl at University College.

The two points in the treatment are, first, to procure an extension of the spine; and, secondly, while the spine is extended, to apply a plaster-of-Paris bandage round the trunk from the ilium to the axilla. If this is properly applied while the spine is extended, it has the effect of holding the ribs still, preventing their action, and therefore the movement of their facets on the corresponding facets of the diseased vertebræ. The work of respiration is taken off the ribs, and thrown upon the diaphragm.

Before the patient is ready to be extended it is necessary to put on a close-fitting shirt, over which the plaster-of-Paris bandage is to be applied. This should consist of some elastic material, not with sleeves, but tying in a soft knot over the shoulders. To allow for the play of respiration, &c., and to prevent pressure on the iliac bones, a pad of tow in a silk handkerchief should be put from below under the elastic skin-fitting shirt. In young girls approaching puberty a similar pad is placed over each mamma, to be withdrawn from above just before the plaster is set. It is withdrawn when the plaster begins to set. It is of great importance that there should be no inequalities in the shirt, as they would give rise to discomfort, and perhaps a sore.

First, the extension of the spine. This may be procured by two assistants, one holding the patient by the axillæ, the other drawing gently on the ankles. But Dr. Sayre has an apparatus for suspending the patient by straps under the occiput and the chin, and attached superiorly to a tripod of iron, the feet of which rest on the ground. As soon as the patient is raised, carefully, by this means from the ground, and provided that the straps fit well, there is a marked expression of relief in the face of the patient, and a corresponding improvement in the shape of the spine, the curves, lateral or acute, being undone in a great measure.

Secondly, without unnecessary delay, the bandages should now be applied. We must be particular in describing these. They should consist of crinoline muslin or "cross-barred muslin." This has large interstices which take in more of the plaster-of-Paris than the common materials of which bandages are made. They should be three or four inches wide and not too long. They should be somewhat loosely folded, and kept in an air-tight tin vessel. Before being used they are to be put *vertically* into water. When all the air-bubbles have escaped from them they are ready for use. On being taken out of the water they should be gently squeezed, so as to get rid of all surplus water. Taking a roller in the hand, commence just around the smallest part of the body, going to the crest of the ilium and a little below it, and lay it round the body smoothly, but do not draw upon it at all. Simply unroll the bandage with one hand, while the other follows and brings it into smooth close contact with all the irregularities of the surface. After one or two thicknesses of bandage have been laid around the body in the manner described, Dr. Sayre places vertically narrow strips of flexible and perforated tin, two or three inches apart, parallel with each other, and in numbers sufficient to surround the body. These—which strengthen the bandage, while adding little to bulk or weight—are to be held by an assistant while the bandager continues to apply two or three more layers of the plaster-of-Paris bandage. As soon as the application of the bandage is complete, the patient should be unsuspended, and laid carefully on his back on a waterproof mattress, without bending the jacket of plaster-of-Paris which has been now applied. As soon as the patient is laid down, dry plaster should be shaken over the casing so as to get more of the plaster into the dressing, rubbing it in with the hand. Before the bandage sets the surgeon should withdraw the tow pads which were placed under the shirt, and then by a slight pressure of the palmar side of the thumb in front of the ilium, and of the hand behind the crest, squeeze the cast forwards so as to allow for the bony projection. Where the bandage has been well prepared and applied it will be hard and dry in about half an hour, and the patient will feel comfortably supported. Spaces for the arms should be cut out.

Where the upper dorsal or cervical vertebræ are affected Dr. Sayre incorporates in his cast an instrument consisting of a light vertical bar, with lateral rib-like pieces of flexible tin, and having at its top a light apparatus for suspending the head and taking the weight of it off the affected portion of spine.

The plaster-of-Paris bandage is also applied, after extension by suspension, in cases of lateral curvature with marked results in lengthening the patient, reducing the deformity, and curing the disease. Time must elapse before we can judge fully of the value of this treatment, but already its power to relieve patients, to increase their height, and to improve their looks is apparent, and it is to be hailed as a dispensation from that yoke of iron appliances which has been at once so unbearably irksome, costly, and useless.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this Society was held on the 11th July, when the following officers were elected for the year ensuing:—President: Dr. Thos. Stevenson, F.R.C.P. Lond. Vice-Presidents: Dr. G. Buchanan (late President), Dr. T. O. Dudfield, Dr. C. Meymott Tidy, Mr. E. L. Jacob. Treasurer: Mr. J. Liddle. Hon. Secs.: Dr. J. Northcote Vines, Dr. W. H Corfield. Council: Dr. Bristowe, Mr. H. Leach, Mr. Lobett, Dr. Rygate, Dr. Tripe, Dr. Whitmore, Dr. Adams, Dr. Baylis, Dr. Bond, Dr. Philpot, Mr. Thomas, Dr. G. Wilson.

THE LANCET.

LONDON: SATURDAY, JULY 21, 1877.

AN inquiry has been instituted concerning the discipline of Christ's Hospital, and it may be assumed that the scrutiny will extend to both establishments—that is indispensable; the junior school at Hertford is preparatory to that in the City of London, and must be considered as part of the system. Another point of practical moment relates to the method of conducting the inquiry. It cannot inspire confidence or command respect unless it is thoroughly impartial. To this end the witnesses will need to be preserved from influence and protected from the consequences of speaking the truth. If "terrorism" has existed without the knowledge of the head master, nothing can be easier than to continue the reign of subjection in spite of his most strenuous endeavours to secure a full disclosure, and the victims of ill-usage in the wards will not dare to state their grievances. It may be doubted whether the Committee are acting wisely in sitting with closed doors, but the intention is doubtless good. The boys may speak freely *in camerâ*, if they are assured of secrecy, and measures are taken to prevent the bullying and "question ordeal" which must be expected to follow in the wards. It is, however, difficult to see how these persecutions are to be prevented, more particularly as the whole staff of governors and officials, from president to beadles, will be harassed by a not unnatural anxiety to learn how the matter goes, and sooner or later the general tenor, if not the precise words, of the evidence collected must leak out. We are not sure that, looking at the matter all round, and thinking of the future as well as the present, it would not have been discreet to give the proceedings full publicity, taking special means to protect witnesses who might seem exposed to annoyance or injury. The Commissioners will do wisely to consider the practical question in detail and in all its aspects before they proceed further.

In any event, the investigation must be one of great moment. The names of the Commissioners afford a sufficient guarantee for the integrity of the trial. It is an inquiry in which something much more important than the character of the executive is involved. The claim that the Hospital authorities ought to be represented before the Committee stands on a false basis. The sole object is to elicit the truth, and that would scarcely be practicable if an ingenious advocate were permitted to browbeat the witnesses. Public opinion has no strong interest in the fate of individual masters or officials, but it has a powerful and lasting interest in the efficient administering of this great historic charity. At all costs and pains the full facts must be brought to light; and if the state of matters disclosed should reflect unfavourably on the existing management, that must be changed, or the system of procedure modified, so that the evils exposed may be remedied. Nothing can be allowed to stand in the way of such reforms as may be deemed desirable. This should be clearly understood, and cannot be too often or too forcibly impressed on the attention of the Commissioners. The inquiry is not intended to "whitewash" the institution or its office-bearers, and no consideration can be accorded to pleas urged in favour of a mere formal scrutiny, a restricted area, or delay.

The questions to which it is all-important to obtain a final answer are at once simple and comprehensive. Is the administration of domestic affairs at this institution such as to conduce to the welfare of the scholars personally, morally, and socially? Is discipline maintained in the schools, the wards, the playground, and the hall—in short, throughout the establishment,—by a system which affords the most complete control with the least severity, and immunity from all avoidable perils of abuse? It would be difficult to exaggerate the gravity of that responsibility which attaches to the government of an institution with resources so ample and a work so important as those of Christ's Hospital. The executive is, in fact, responsible for the moral not less than the intellectual training of the great body of youths under its guardianship. It is not necessary to particularise the possible sources of enfeeblement, and even corruption, to which boys herded together, without the most rigorous domestic control, may be exposed. If "terrorism" prevails in the wards, "favouritism" is probably not less rampant, and of the two this is the most malignant evil.

It is one of the most pregnant evils of a school system which supplements and eke out the service of a small staff of properly trained and responsible officials by the appointment of pupil monitors, that the worst forms of tyranny and toadyism are fostered. When the monitor system is restricted to school-work, it is not attended by all the disadvantages to which we point. The worst effect of the evil is, perhaps, under that condition, limited to the engendering of petty impulses in the minds of boys armed with an authority they are as yet too young to wield, and depreciation of the healthy sentiment of respect in the minds of those who find a pigmy official obtruded between themselves and the legitimate holders of office and power. In the playground the monitor system is somewhat more objectionable, but it is in the wards of an establishment like Christ's Hospital it is seen at its worst and produces the most baneful fruits. When the domestic lives of boys are controlled and their habits formed by the authority of members of their own class only a few years nearer manhood than themselves, and there is an absence of the closest personal supervision, dire mischief is likely to ensue. The weak cringe for protection, the sinister resort to the depths of degradation, to secure favour; the good and pure are demoralised or persecuted. The petty tyrant has his caprice and humours, his objects of dislike, his parasites, and his favourites; his worst propensities find vent, and are encouraged; he gratifies his passions, wreaks his revenge, acts on impulses and ruins himself and those placed at his mercy, as impulse may determine. Such a rule is rarely free from gross corruption, and for the damage and debasement that happen to body and mind those who institute such a system are directly responsible. There is no sort of excuse for carrying on the domestic administration of Christ's Hospital by the monitor system. The charity is provided with funds amply sufficient for the

maintenance of a proper staff of officials, and if the persons now in possession of the several offices are not disposed to discharge the duties of constant control, it is time they were replaced by others more keenly alive to the obligations of humanity and prudence. It would be judicious, if need be, to reduce the extent of the charity, so that what is done may be done thoroughly and in accord with the obvious requirements of propriety and safety. There is, unhappily, no room to question the inefficiency of the existing *régime* at this establishment, regarded in its domestic aspect. It is clearly not of a nature to secure the moral and intellectual health of the scholars; and wholly apart from the accident of good or bad conduct on the part of a particular monitor, public opinion has a right to demand that the occurrence of this deplorable event shall be the signal for complete household reform.

"Fagging," properly so called, does not probably exist at Christ's Hospital. The institution as a charity is not likely to be the scene of practices which have taken root and developed in the large seminaries where boys with superior social status and prospects are received. The alleged merits and demerits of the "fag" system need not therefore be discussed. It would be unreasonable to discuss it in such a connexion. Meanwhile, whatever disadvantages may accrue to the subjection of junior boys to those only a little older, are sure to be present in a peculiarly objectionable form where the service rendered forms an integral part of schoolhouse discipline, and is, in fact, depended upon for the performance of ordinary domestic duties. When "fagging" is permitted, without being enforced, the service is one of custom, and, however irksome, is not essentially menial. When, as at Christ's Hospital and other ambitious charitable institutions, it is recognised as "service done for the establishment" under the task-mastership of older boys, the system is little better than one of slavery, and the boys condemned to this duty are reduced to the level of the drudge. It is simply monstrous that such a system should be permitted at establishments endowed with the means of self-maintenance. A charity so administered is dishonoured, and its subjects are disgraced. That the power of punishment should be entrusted to boys employed by the executive school authority to enforce discipline under a system of this nature is inevitable. If the concession is not expressed in a rule, it must be embodied in custom. The constitution of the establishment is one in which the governors permit the masters to hand over the whole moral discipline of the school to the pupils. Whether this initial error is one of judgment, or the result of trying to make a little money go a long way by paying insufficient stipends to officials who are allowed to neglect their proper work, is unimportant. It is with the act we are concerned.

What ought to be done by the masters is at this charity entrusted to a warden, to be executed, under his nominal supervision, by a legion of half-trained boys. Obviously authority so delegated can only be enforced by fear—the fear of blows. "Flogging," or condign punishment of some description, must be the prime mover of machinery so organised. The motive powers of "respect" and love are excluded from the system, and nothing remains but corruption and fear. This is a deplorable condition of matters, and it is well that it has been exposed, though a painful circumstance has been the agent of discovery. Cruel flogging administered by a superior authority is the complementary incident of a system rotten to the core. From a bad stock there must come bad sprouts. A government carried on by deputy will inevitably be weak, and there is no more constant expression of weakness than unbridled wrath. The picture of Christ Hospital chastisement painted by its victims may be too highly coloured. It may not take more than two beadles to wreak the passionate vengeance of scholastic authority on children of twelve or fourteen years, and there may be a little grim pleasantry in the story of pieces of birch-rod being picked out of the lacerated wounds in a back belaboured in this charitable institution. Enough, and far more than enough, however, is doubtless true to place the need of a searching inquiry beyond question. It is impossible not to feel that the condition of matters at Christ Hospital constitutes a grave scandal. While large establishments less well-provided with the means of securing an efficient management are successfully conducted without a clumsy and cowardly use of the pedagogue's ferule, this show charity, with its pretentious parade, seems to be carried on as clumsily as the notorious establishment CHARLES DICKENS once exposed to such excellent purpose, and, we had fain hoped, with deterrent effect.

A PARAGRAPH has appeared in some of the daily papers to the effect that the Senate of the University of London has decided by a considerable majority in favour of admitting women to degrees in the other faculties, as well as in the Faculty of Medicine. But the Senate has no power to admit women to these degrees. It is true that at its last meeting the Senate resolved to ask for a new charter enabling it (with the consent of Convocation) to admit women to these faculties; and, in fact, a very peculiarly worded motion was passed that the Senate should seek to obtain for other faculties "that power which it already possesses in the case of the Faculty of Medicine." Only four senators voted in the minority, for the resolution was brought on late in the meeting, and many members had departed under the impression that the subject would be postponed. It is needless to say that in the present complicated state of affairs a motion worded as above, and the division taken upon it, are of little significance. It is curious to observe, however, that one senator, who has strongly supported the admission of women to medical degrees, does not deem them worthy of Arts and Law degrees, for he voted against the application for the new charter. We cannot but think that a divided opinion on the whole question must have influenced the senatorial "majority," or, on the other hand, that this majority must have been in doubt whether Convocation would sanction a new charter admitting women to all degrees, else they would never have taken advantage of the accident of a permissive Bill, and thus placed themselves in direct hostility with Convocation, an extraordinary meeting of which, in accordance with two requisitions, influentially signed, has been summoned by Dr. STORRAR, its chairman, who has recognised the seriousness of the difficulties which have arisen in the University, and has fixed Friday, July 27th, for the meeting. In the circulars con-

vening it, notices of several important resolutions are given —resolutions to the point, though temperate in their tone. It is proposed to ask the attention of the Senate to the fact that in 1874 it passed through Parliament, without the consent of Convocation, the Medical Acts Amendment (University of London) Act, and that the Annual Committee felt "bound to point out that, by obtaining their extended powers by Act of Parliament instead of by a supplemental charter, the Senate have for this occasion deprived Convocation of perhaps its most important and most valuable privilege." Nothing could be much stronger or more to the point than this; and Convocation, at the suggestion of the Annual Committee, expressed unanimously "their hope that for the future no similar action will be taken without the consent of Convocation." We believe that the Senate on this occasion admitted that Convocation had right on its side; and it is difficult to understand how the recent action of the Senate can be shown to be less injurious to the rights of Convocation than its doings complained of in 1874. Convocation will be also asked to express its regret that the Senate has, by adopting a permissive Act of Parliament without consulting Convocation, materially altered the constitution of the University, and practically superseded the privileges of Convocation. In the event of these resolutions being carried, the Annual Committee will be requested to consult with the Senate, and, if necessary, to arrange a deputation to wait on the Home Secretary. We confess that our sympathies are entirely with the requisitionists, and that we think, as we said last week, that the moral rights of Convocation have been encroached upon. It is indeed painful to think that within three years of the above-named unanimous expression of the Annual Committee and of Convocation, the Senate should have seized the first opportunity which came to put itself in antagonism with Convocation. In the face of permissive Acts of Parliament, of what value is the Charter of the University? It is absolutely worthless, as far as Convocation is concerned, and the only privilege which the Senate seems willing to grant Convocation is that of electing a certain number of members of the Senate. The clauses which give to Convocation the right of accepting or rejecting alterations in the constitution of the University had better never have been written if the Senate, taking its stand against the spirit of these clauses on a permissive Act of Parliament, totally neglects the wishes of Convocation. We have previously advocated a conciliatory action on the part of the Senate, and surely the "majority" is not so blind as to suppose that Convocation, growing year by year in number and dignity, can be put down by what we are bound to describe as a senatorial oligarchy, such an oligarchy, indeed, as exists nowhere else in the kingdom. Some members of the Senate seem to have lost all notions of the equity of things, and we greatly regret it. Surely they do not (as has been done by some of their supporters) justify their conduct by asserting that they are "pledged" to go on in face of the decision of Convocation, or that they would "stultify themselves" if they paused for a while. We trust that the graduates of all faculties will weigh well the momentous questions which have been raised, and that they will attend in such numbers at 5 o'clock on Friday, July 27th, as will prove that they are aroused to strong interest in the affairs of the University, are fully alive to their rights, and determined by all legitimate means to maintain them.

IT was MAJENDIE who gave the name of *recurrent sensibility* to certain phenomena he had observed in connexion with the anterior roots of the spinal nerves. It had always been taught that after the section of a nerve the central end alone remained sensitive; but the peripheral ends of the divided anterior spinal nerve-roots in certain experiments of MAJENDIE's had offered apparent examples of an exception to the rule. Other experimenters had failed to get MAJENDIE's result, and even that physiologist himself could not be sure of demonstrating the fact that the anterior nerve-roots possessed sensibility. CLAUDE BERNARD pointed out that in order to demonstrate this "recurrent sensibility" it was necessary to allow the animal some hours' rest between the operation for exposing and dividing the nerve-roots and the trial of their sensibility; otherwise the shock and fatigue of the operation were sufficient to overshadow, as it were, the normal sensibility of the animal. MAJENDIE and BERNARD had also both shown that the peripheral end of the divided facial nerve was distinctly sensitive. With regard to the sensibility of the peripheral end of the anterior spinal root, it had been shown that this sensibility was completely destroyed after section of the posterior root or by section of the mixed nerve at a distance of five or six lines beyond the point of junction of the roots. SCHIFF was the first who verified by the aid of the microscope this physiological fact. He found, after division of the posterior root beyond the ganglion, that after a lapse of some days degenerated fibres were to be recognised in the anterior root. PHILIPPEAUX and VULPIAN made similar experiments with the hypoglossal by dividing that nerve. "We have found," they say, "ten or fifteen days after the operation, a small number of perfectly sound nervous filaments in the midst of the degenerated fibres of the peripheral end"; and that these fibres were sensitive was proved by the pain occasioned by pinching. BROWN-SÉQUARD was inclined to attribute the pain which the animal evidently felt to the muscular contraction caused by the excitation of the motor nerve. Latterly MM. ARLOING and LÉON TRIPIER have pointed out that after section of the facial nerve pain is felt on irritating the peripheral extremity long after the complete degeneration of the motor fibres and cessation of all motor function.

In 1864 LAUGIER published the case of a man who, after division of the median, recovered sensibility in the median region of the hand in a very few hours. HOUEL in the same year, and RICHET in 1867, published similar cases. At this time MM. ARLOING and TRIPIER commenced the systematic investigation of this subject. They showed that "if one divides successively the four collateral nerves of a finger the section of a single nerve produces no change in the sensibility; of two hardly any change; of three a slight alteration in sensibility; but that the division of all four causes complete paralysis of function beyond the sections." Their experiments, and the manner of making them, also showed that the sensory impressions made on the peripheral ends of divided nerves travelled *vid* the peripheral anastomoses to neigh-

bouring nerve-trunks which were yet uncut. They removed a piece two centimetres in length from one branch of the radial nerve of a dog. After twenty-four days the wounded nerve was laid bare; its central end was found bound down by cicatricial tissue. On irritating the peripheral segment, the animal gave lively signs of sensibility. The animal was killed, and the peripheral end, after hardening in alcohol and chromic acid, and colouring with carmine, was examined, when a certain number of perfect filaments were detected amongst the mass of degenerated fibres. This double result showed beyond a doubt that the sensibility of the peripheral end was due in this case to the presence of sensitive fibres, whose physiological properties were preserved because they had not lost their connexions with their nerve-centres. It was impossible, therefore, not to admit that centrifugal sensitive fibres must get detached from the uninjured nerve-branches to ascend by another branch of the radial and become centripetal. After this the sensibility which was provoked by irritating the peripheral ends of the nerves of the hand was, to them, truly recurrent sensibility, and, as the persistence of sensibility in the peripheral end had always coincided with a persistence of sensibility in the integuments, they concluded that there must exist "a cutaneous nervous network which for every region is ordinarily always dependent on several nerves."

The most recent investigations of MM. ARLOING and LÉON TRIPIER tend to secure the position they have taken up, and numerous experiments and microscopical examinations in dogs, cats, rabbits, horses, and donkeys, have led them to the following conclusions:—1. The facial and spinal accessory nerves of solidungulate animals and rodents, as well as of carnivora, possess recurrent sensibility. 2. Recurrent sensibility is more easily demonstrated the nearer we approach the periphery of the nerves. 3. The peripheral end of the trigeminus is sensitive, although the fact is difficult to demonstrate. 4. The peripheral ends of the nerves of the trunks are sensitive. This disappears as we ascend the nervous trunks. 5. In every case the sensibility of the peripheral end is due to the presence of nervous tubes whose relation with perceptive and trophic centres has not been interrupted by the section. 6. When these tubes are absent, the peripheral end is not sensitive. 7. These tubes from the facial proceed through the fifth pair; from sensitive nerves through neighbouring nerves and parallel nerves of the opposite side; from mixed nerves through neighbouring and homologous nerves. 8. These recurrent tubes mount more or less high in the trunk of the nerve with which they are joined; their number diminishes as we go from the periphery towards the centre. 9. The turning-point of these fibres may take place short of the termination of the nerve, but the periphery is the point of election.

The microscopical preparations of MM. ARLOING and TRIPIER have been prepared with osmic acid, and the degenerate and perfect fibres stand out in bold relief, and seem conclusively to back the assertions they have made.

IN a remarkable letter in the *Pall Mall Gazette*, on the recent lamentable disclosures as to the abuses of confession in the Church of England, Mr. LEWIS CARROLL, with good reason in the main, but, as we think, with a more or less imperfect knowledge, repudiates the analogy sought to be established between the confidential inquiries of the physician as to bodily health and those of the priestly confessor, as to what has been termed "spiritual pathology." Mr. CARROLL'S reasons, shortly stated, are twofold—first, that "human intervention" is always necessary in the case of bodily disease, but is, or ought to be, "most exceptional on the psychological side of the analogy;" secondly, that on the physiological side there is no fear of aggravation of the disease by a system of minute questioning, while "on the psychological side the danger is real and imminent." The subject is one which, as a matter of purely religious and general controversy, cannot be said to come closely within the scope of a medical journal; but the persistent use of such analogies as are here discussed makes it very desirable, if possible, to clear the question of all false issues. Now, while we are at one with Mr. CARROLL in his main contention—viz., that there is no real analogy between the so-called priest in the confessional and the physician engaged in his legitimate function of eliciting the facts of a case of bodily disease, we are by no means sure that the latter function is so free from all risk of abuse as is presumed by our apologist, nor do we think that in all cases the necessity for "human intervention" is demonstrably greater in the physical than in the psychical case. The real difference between the two cases is not quite so apparent, and therefore not quite so easily formulated; and yet, perhaps, it has been present to Mr. CARROLL'S mind, while it has failed to direct his choice of arguments. Were the physician habitually and as matter of course to beseech, threaten, persuade, or otherwise induce men engaged in active life, and not really conscious of grave ailment, to repair to him confidentially from time to time as part of a definite system of hygiene, and were he to use the opportunities thus presented to alarm their sensitiveness, and probe their functional derangements, and "get up a case," in short, of physical unsoundness, as these "priests" are instructed to do with respect to the inner sense of unsoundness which, on minute self-examination, is present to every man at times, whether in the physical or the moral sphere, the evils of the one proceeding would be just as great as those of the other. Were he to go further, and "suggest" to the physical hypochondriac, out of a complicated detail of physical evils written in a book, those which are most likely to waken up the latent sense of misery, and to convert the wholesome impulses of active outgoing energy into the querulous introspection and self-tormenting faculty of the physical monomaniac, and to do all this on the plea that it was absolutely necessary for a cure which could be worked only by occult ceremonies and mysterious specifics, the parallel between the two cases would be closer still. Were he to apply this method of minute detail to the minor irregularities of the sexual system—— But enough. It is not necessary or expedient to carry the description further. Everyone knows that this, or something like it, is actually the mode of practice of certain persons claiming to be of our profession, but everyone also knows how they are regarded among us, as well as by all Englishmen in their sound senses. Happily, physicians are not priests, and make no claim to be such, even as regards the body. Their proceedings, there-

fore, in dealing with their patients are guided by precedents open to the light of day, and founded on knowledge which, although specially and scientifically cultivated by them, does not require to be mysteriously handed about in manuals studiously concealed from their patients, or insidiously obtruded upon them in strict confidence. And it would be well for the Church of England were her "priests" to fulfil to the utmost the real analogy here pointed out, to cast out as a disease of religion all occult practices and mysterious presumptions of superhuman power or skill, while maintaining a high level of scientific culture and a broad and genuine human sympathy with frail and morbid human nature.

Annotations.

"Ne quid nimis."

THE HARVEY MEMORIAL.

On the 1st of April next three hundred years will have elapsed since the birth of Harvey—the man who, perhaps, of all others has done most to put medicine on a firm physical and physiological basis. It is proposed, as our readers know, to raise a statue to Harvey at Folkestone, his birth-place, in a conspicuous situation, which will be well seen by foreigners and his countrymen. A meeting of the promoters was held on Wednesday at five, in the College of Physicians. Dr. Owen Rees was in the chair, in the unavoidable absence of Dr. Bennett, the President of the College. There were present Sir Thomas Watson, Sir George Burrows, Dr. Hadaway, Dr. Day, Mr. Hart, Dr. Sieveking, Dr. Barnes, Dr. Glover, Dr. W. H. Lowe (ex-President of the College of Physicians, Edinburgh), Mr. Hilton, Dr. Wilks, Dr. Begley, Dr. Hare, Mr. Eastes, &c. An acting committee was appointed, consisting of Sir G. Burrows, Sir W. Gull, Sir James Paget, Sir Francis Hicks, Dr. Quain, Mr. Simon, Sir Sydney Waterlow, Mr. S. Lushington, Dr. Owen Rees, and Mr. Prescott Hewett. Dr. Hare and Dr. Glover were appointed auditors of the accounts. The principal fact which transpired at the meeting was that about £800 has been raised, after paying expenses, for the work proposed. This is clearly quite inadequate to the object and unworthy of the profession. Nine months more remain for the committee to work and the profession to give, and we feel confident that in this short period both will do their duty. Resolutions were passed, instructing the committee to make application to the various bodies of the profession, which we hope will be liberally responded to. The appeal is a unique one.

PROF. HUMPHRY AND THE VICE-PRESIDENCY OF THE COLLEGE OF SURGEONS.

At the meeting of the Council of the College of Surgeons on Thursday week, Professor Humphry, who stood next in order of seniority to the Vice-President, stated that though there were many reasons to induce him to come forward for the vice-presidency, and in due time for the presidency—such as, first, the desire not to appear to shrink, without sufficient reason, from any duty which, as a member of the Council, he owed to the College; secondly, the consciousness that it would be agreeable to the Fellows and Members of the College resident in the provinces that one of their number should hold the highest offices in the College; thirdly, the desire to promote a closer union between his University, as a representative of literature and general science, and the profession, and the feeling that it would be gratifying to the members of the University that one of its body should hold the honourable offices of vice-president and president of the College of Surgeons; fourthly, the ambition, the honourable ambition, felt by all the members of the Council and Fellows of the College, to occupy positions which place those who fill them at the head of the profession of surgery, and give them the opportunity to do good work for the College and the profession; still, before and above all these considerations, he was bound to place the interests of the College, and to reflect whether he could fulfil in a satisfactory manner the duties of the office of vice-president, and more particularly of president, without neglecting the duties which devolved upon him as Professor of Anatomy at Cambridge. This, he was forced to conclude, it would not be in his power to do. The duties of the presidency are extremely various, requiring an almost daily attendance at the College for the transaction of business, an attendance at numerous committees, and an intimate acquaintance with the affairs and administration of the College, which it is scarcely possible for him to possess. These duties had doubtless been increased by the zeal and assiduity in promoting the interests of the College which had been displayed by those who had recently held the office of president; but he should regret that an era of diminished zeal and a lessened effort in such a cause should be inaugurated by himself. His labours at Cambridge as Professor of Anatomy and surgeon to the hospital were very considerable, and necessarily increased by the increasing number of students of medicine at the University, and were quite incompatible with that frequent attendance at the College which would be requisite for the efficient performance of the duties of the presidency. He therefore felt sure that the Council and the Fellows of the College would agree that he was acting in the manner most conducive to the interests of the College in allowing the office of vice-president to pass on to one who would be able to discharge its functions far better than it was possible for him to do.

HOSPITAL TREATMENT OF MEASLES.

SANITARIANS look to hospital isolation as affording the most reasonable means for controlling the prevalence, and hence the fatality, of many zymotic and epidemic diseases. The effect of the hospital treatment upon the mortality of these diseases, therefore, becomes a subject of much importance. There is a very general impression that hospital mortality considerably exceeds the mortality of cases treated at home; but, whereas the mortality of hospital cases is readily ascertained, this is not the case with those treated out of hospital. On this account, and from the fact that the worst cases are probably taken to hospital, reliable data for comparing the mortality among cases treated at home and in hospital are probably not available. Statistics of hospital cases of small-pox, scarlet fever, typhoid fever, and typhus, treated in the Metropolitan Asylum Hospitals, and in the London Fever and Small-pox Hospitals, are steadily accumulating. So far as we are aware, however, the London Fever Hospital can lay claim to novelty in admitting cases of measles into hospital. The experiment is one which is full of interest, for undoubtedly measles is one of those infectious zymotic diseases the prevalence of which might be controlled by hospital isolation instead of treatment, or often no treatment, in overcrowded urban tenements. Towards the end of April, six cases of measles were admitted to the London Fever Hospital, since which sixteen others have been admitted, of which three remained in hospital on 14th instant. The nineteen completed cases included seventeen recoveries and two deaths. The numbers are small, but the deaths were equal to 10·5 per cent. of the completed cases, which corresponds very nearly with the

average rate of mortality among cases of scarlet fever treated in hospital. During the quarter ending 30th June last, 682 deaths from measles were registered in London, representing, according to the hospital proportion, more than 6000 cases. It is impossible to say how many of these cases might have been avoided, and how many of the 682 lives saved, if hospital isolation had been locally available, and recently turned to account in the metropolis.

THE VENTILATION OF THEATRES.

ANY theatrical manager who would pay proper attention to this most important matter might, we feel sure, other things being equal, safely raise his prices of admission above those of his neighbours, and always have his theatre full. Thousands of persons stop away from the theatre because they cannot endure the heat and the suffocation, and thousands more stop away in obedience to the advice of their medical attendants.

The Canterbury Hall in the Westminster-bridge-road has set a valuable example in having a movable-domed skylight roof over the centre of the auditorium, which, when it is open, affords an efficient exit for the foul air. The results of an inspection are thus reported:—"We visited this establishment last week, arriving in the theatre about 10.15. The house was very full, the audience were, many of them, smoking, and the stage was occupied by a numerous *corps de ballet*, and lighted very brilliantly with gas. The roof was open, and through the oval aperture an occasional star in a partially-clouded sky was visible. The atmosphere in the theatre was fairly good, and certainly would have compared most favourably with that of any other London theatre. We had not been ten minutes in the house before a drop of rain fell; an umbrella was promptly hoisted by a lady in the stalls, and immediately, and as quickly as we can write the fact, the sliding glass cover was *in situ*, and the house was water-tight. After the theatre had been covered in, the atmosphere quickly became 'theatrical,' and we left."

We may mention that the aperture in the roof does not interfere in any way with the acoustic properties of the house, which seem first-rate. We look back with great pleasure to a performance of "Masaniello" which we once heard in the pleasant city of Prague. The auditorium of this opera-house had no roof at all, and, although not a note of the most delicate passages of the opera was lost, the audience enjoyed an atmosphere of almost absolute purity. Why may we not have a similar luxury at Covent-garden or the Haymarket?

THE GROCERS' LICENCE.

IT would be undesirable to characterise an attempt which has been made by a periodical devoted, we presume, to the interests of the grocers' trade, and denominated *The Grocer*, to throw discredit upon the protest signed by 920 members of the medical profession published in these columns against the licence to sell intoxicating liquors with ordinary commodities in a shop not specially controlled by the police. It is alleged that, taking our lists of medical men who have signed the protest, *The Grocer* has instituted a scrutiny with the following results, which we give in its own words:—

"Answers to inquiries respecting signataries:—Total abstainers, 11 per cent.; related to brewers, 15 per cent.; buy wines, &c., of grocers, and recommend patients, 14 per cent.; not known in town, 5 per cent.; retired army surgeons and just commenced practice, 7 per cent.; no grocers' licences in town, 3 per cent.; persons of no importance and intemperate, 6 per cent.; reasons for signing unknown, 34 per cent.; medical assistants, 5 per cent."

It is not in our power, nor should we deem it worth while, to institute a commission of inquiry. The paper signed was simply printed in our issue of May last, and returned by our subscribers and others into whose hands the paper may have fallen. Had any special effort been made to obtain signatures, we have reason to believe the return would have been greatly more extensive. Our contemporary is deceived if the belief be cherished that this expression of opinion was elicited in response to an exceptional effort. We have not the slightest interest or feeling in the matter beyond that forced upon us by observation and the representations made to this journal by medical men who have witnessed the disastrous effects of the licence. We are not concerned to know whether the petitioners signing the document are "total abstainers," or whether they believe stimulants, like everything else of the kind, are both useful and abused. We have no notion that if the Grocers' Licence were immediately repealed there would be a marked decrease of drunkenness. The position we take is simply this: The facility with which spirits, wine, and beer may be procured under cover of ordinary purchases offers a new and wholly needless temptation to secret drinking among those who would not indulge in that injurious propensity if they were unable to procure supplies except at the licensed victuallers'. Respectable women would not risk the exposure of purchasing drink at a public-house. The fact of their being able to buy a bottle of spirits or wine at the grocer's when paying a bill or ordering general stores—perhaps conveying the bottle in a reticule or muff—obviously creates a new facility and temptation. We have reason to believe, and at least 920 members of the medical profession share the opinion, that this is an evil. We are not in the least concerned to inquire how the fact may bear upon the trade in intoxicating beverages carried on elsewhere. Our protest is limited to the recent creation of a new and unnecessary source of supply, and what we believe to be its peculiarly disastrous consequences.

THE TELEPHONE.

A PRIVATE demonstration of the novel and ingenious apparatus by which Mr. Cromwell Varley has succeeded in conveying sound along an electric wire, took place at the Queen's Theatre, in Long-acre, on the 12th inst. It is impossible to give a very accurately scientific description of the apparatus from the imperfect inspection of it which we were able to obtain, but the following are some of the main facts concerning it.

The receiving end of the telephone, which in outward appearance resembles a large tamborine, was placed on a chair in front of the orchestra of the Queen's Theatre; round the rim of the tamborine were several tightening screws, and to one corner of it an insulated wire was attached, the other end of which was in connexion with an electric apparatus in the green-room of the theatre. It was originally intended to have the starting apparatus at the Canterbury Hall, and the receiving telephone itself at the Queen's Theatre, and, in fact, the two buildings had been united by a wire for this purpose. In order to afford facilities for inspecting the mechanism, however, both parts of the apparatus were stationed in the theatre, but messages sent from the green-room to the stage travelled *vid* Lambeth and the Canterbury Hall. Of the power of the telephone to emit sound there could be no doubt, for it performed in a perfectly recognisable form such simple melodies as "Home, Sweet Home," and the "Blue Bells of Scotland."

The performance was not so perfect musically as could have been wished, some of the notes being blurred and discordant — a fact which was due to the atmospheric effect upon certain of the necessary springs and connecting

screws. In quality, the sound was something between that emitted by a comb covered with paper and a hautboy.

The mechanism was as follows:—In the cellar were a series of tuning forks, forming a complete octave. Each of the forks was kept in a constant state of vibration by the trembler of an induction coil. By means of a key-board any one of the forks could be included in the circuit of which the telephone formed part, and thus the rate of vibration of the fork, and consequently the pitch of the note, was conveyed to that instrument.

The telephone itself is really an electrical condenser, and consists of a thin sheet of gutta-percha with a sheet of silver-foil on either side of it, the attractions and repulsions of which communicate the requisite vibrations to the atmosphere, and thus produce the desired effect. The telephone is at present only a scientific toy of very great interest, but it may possibly be the beginning of great things. The instrument as at present shown requires the intervention of a key-board and a manipulator before the pitch of the tuning fork is communicated to the telephone; but it is readily conceivable that by a suitable use of resonators the pitch of instrumental or vocal notes may be made to traverse a wire. The possibility of singing a message from London to New York may be in the dim distance, for the ingenuity which has accomplished so much may well do more.

THE PROPHYLACTIC TREATMENT OF PLACENTA PRÆVIA.

THE American supplement of the *Obstetrical Journal of Great Britain and Ireland* for May contains a summary of a very interesting article by Dr. T. Gaillard Thomas on the Prophylactic Treatment of Placenta Prævia. The article is published in the *American Practitioner* for May. Dr. Thomas gives the particulars of eleven cases of this unpleasant complication. The results were very satisfactory. Only one of the mothers died, and seven of the eleven children were born alive. Dr. Churchill says that under ordinary management one in three, or thereabouts, of the mothers die, and more than half of the children are lost. The essential feature of Dr. Thomas's practice was the induction of premature labour. In eight of the eleven cases the chief agent in inducing premature labour was the use of Barnes's bags. The placenta was not in all cases to be felt, but where the natural indications of its presence existed Dr. Thomas acted as though he felt it. He did not in all these cases act with haste, or on the first occasion of hæmorrhage, but generally, as soon as he was satisfied that the placenta presented some proof that the further loss of blood was dangerous, he recommended the induction of labour. We believe that there would be a general concurrence of opinion on this subject now. Once satisfied that a case is one of placenta prævia, it is desirable, in the interest both of the mother and of the child, to watch it very closely, and before the patient becomes exsanguine, to proceed to induce labour. Dr. Barnes's judgment on this point will be generally accepted—"If the pregnancy has advanced beyond the seventh month, it will, as a general rule, I think, be wise to proceed to deliver, for the next hæmorrhage may be fatal. We cannot foretell the time or the extent of its occurrence, and when it occurs, all, perhaps, that we shall have the opportunity of doing will be to regret that we did not act when he had the chance." In several of Dr. Thomas's cases, to expedite delivery, version was practised, generally by the bimanual method. In one, Barnes's bag, impinging on the presenting heads, caused the child to revolve in the liquor amnii till the breech presented. We notice that in most of the cases before version and delivery were performed the patient was anæsthetised, generally with ether. In the one fatal case the patient had had hæmorrhages during the seventh and eighth month. She came under Dr. Thomas's care at the end of the eighth month. She was carefully watched for Dr. Thomas by Dr. C. S. Ward for a week, and "as decided hæmorrhage recurred," premature labour was decided on. The bags were used, and a female catheter was introduced into the uterus. Pains came on in three or four hours, and the patient was delivered of a vigorous male child; but in forty-eight hours puerperal septicæmia came on and proved fatal. Perhaps a better result, even in this case, would have followed earlier induction of labour. One month after, the lady's sister, in the same house, attended by Dr. Sands, after a perfectly natural labour, died of puerperal fever.

SHEFFIELD MORTALITY STATISTICS FOR 1876.

THE Annual Report on the sanitary condition of the borough of Sheffield during 1876 contains most valuable and suggestive mortality statistics. The health of this borough, with an estimated population of 274,914 persons in the middle of the year, has shown a continuous improvement in recent years, so far as this may be judged by the careful analysis of mortality statistics presented by Dr. Griffiths. The annual death-rate during 1876 was equal to 24·2 per 1000, which showed a further decline from the rates which prevailed in the two preceding years, and was 2·2 per 1000 below the average rate in the six years 1870–5. The death-rate from the seven principal zymotic diseases was equal to 4·8 per 1000, while in the six preceding years it had averaged 6·3 per 1000. Among the many important points dealt with in this Report, two are of special interest—the mortality of illegitimate infants, and the proportion of uncertified deaths. It is to be regretted that these subjects do not command more general attention from medical officers of health, and that statistics relating to them are not always as well arranged as they are in Dr. Griffiths's report for Sheffield. It appears that during 1876 the number of births registered as illegitimate was 528, equal to 4·8 per cent. of the total births. The rate of infant mortality in the borough was equal to 169 deaths under one year of age to 1000 births registered; whereas, however, this proportion did not exceed 162 per 1000 among infants born in wedlock, illegitimate infants died in the proportion of 305 to 1000 born. The proportion of deaths of illegitimate infants under one year was as 188 to 100 of infants born in wedlock; Dr. Griffiths, however, is able to say that this large excess showed a decline from that which prevailed in 1875. In the Attercliffe registration sub-district of the borough the deaths of illegitimate infants under one year of age was in the startling proportion of 582 to 1000 born, suggesting the probability that "in some form or other 'baby-farming' is carried on in this part of the borough."

Dr. Griffiths, on the subject of the certification of the causes of death in Sheffield in 1876, remarks that "in 7·9 per cent. of the deaths registered no scientific evidence of the cause of death was forthcoming at the time of registration, affording dangerous facilities for the concealment of cases in which gross, if not criminal, negligence may have contributed to the death recorded." In other words, the cause of death in 7·9 per cent. of the deaths registered was not certified either by registered medical practitioners or by coroners, the majority of the deaths being registered on the information of the very relatives of the deceased who had neglected to provide medical assistance. The death-register in Sheffield, is, moreover, said to contain "undoubted evidence that too few inquests are held within the borough," as in many cases "deaths from various forms of violence are registered without any certificate either from medical practitioner or coroner." A few striking instances are given of the neglect of the precautions which are in

most places considered necessary for the security of human life from culpable negligence, and from the effects of wilful crime. It is only possible here to allude to one of them:—"The cause of the death of an infant, aged three weeks, registered by the mother, who signed by mark, was described as 'Found dead in bed, supposed to have been overlaid;' the cause of death in this case was not certified either by coroner or by medical practitioner. In Sheffield inquests were held in only 2·6 per cent. of the deaths registered, whereas in the twenty largest English towns the proportion averaged 6·1 per cent. It is impossible to urge a stronger argument in favour of some State regulation of the unlimited discretion now exercised by coroners as to the necessity of holding inquests.

PARLIAMENT AND THE SMALL-POX.

AT last the small-pox has been mentioned in the House of Commons—only, it is true, in the way of question and answer. But we must be thankful for small recognitions of the public health, seeing that it is a matter of no political importance. There has been no committee appointed, as in the case of the cattle plague, to search out the strange origin and spread of a human plague, almost every case of which might have been prevented. But Dr. Lush has put questions to Mr. Sclater-Booth which have extracted from the President of the Poor-law Board the very vague information that "some of the vestries" have provided accommodation for the cases, and that "some boards of guardians" have taken steps, by house-to-house visitation, to insure greater attention to the practice of vaccination. More satisfactory is Mr. Sclater-Booth's promise that he will take care to have the history of the epidemic investigated, and the experience of the last twelve months collected and put into shape with the view of considering whether further legislation is necessary. This undertaking, though late, has an earnest sound, and, if honestly and intelligently carried out, may expose either very grave defects in sanitary law or very great carelessness in its administration. Though still amazed at the indifference that has allowed an epidemic, so apparently localised in its origin and so disastrous in its progress, to have been hitherto ignored, we feel grateful to Dr. Lush for his action in the matter, and to Mr. Sclater-Booth for replying to Dr. Lush in a way somewhat befitting the gravity of the subject. We shall watch with great interest the investigation which he has promised, and the means selected for making it. A Royal Commission, as we have before observed, would be the fittest instrument for the purpose.

THE SOUTH DEVON AND EAST CORNWALL HOSPITAL.

FOR the past three or four years it has been evident to the committee and working staff of this hospital that its accommodation has been quite insufficient, and that the demands on its space have been much greater than the present building could fairly meet, so that the wards have often been much overcrowded, and their hygienic and sanitary arrangements very unsatisfactory and deficient. After a long and patient investigation the committee have resolved not to limit the number of admissions, but to extend the accommodation afforded by the hospital. One of these steps was obviously needed, as a condition of overcrowding is always fraught with much peril to the inmates of any hospital, however excellent its supervision may be. It appears from the report of the architect, Mr. Wyatt, that altering the present building would be extremely expensive and comparatively useless, for quite £5000 would be necessary to perfect the drainage and erect new wards, which would then (allowing 2000 cubic feet per bed) only offer a gain of four additional beds for ordinary patients. Even then the architect would not consider that its arrangements, light, and ventilation were such as modern experience and knowledge would suggest, but that it would be convenient, healthy, and practically efficient for eighty-five beds. Altering and making additions to an old building so structurally deficient as this is are always expensive and but rarely satisfactory, and we entirely agree with the committee that it would be very unwise to sink so much money for such a small result, the more especially as the cost of a new building for 100 beds is only estimated at £13,000, assuming that the cost of a new site would be covered by the value of the present one and the buildings upon it. The project of adding a supplementary building to that already existing, or of extending it in its present position so as to obtain 100 beds, would have given rise either to extreme difficulty in management, or to even more expense than its removal and reconstruction. We congratulate the committee on the wisdom and boldness which they have shown in the matter, and would only suggest that they should not too readily fix on any site, such as that at Clifton-place, unless the financial difficulties in the way of securing a better one are much greater than we understand them to be. The question of the future of the charity is as important as the mere wants of the present time, and the demands on the charitable public of Plymouth and the adjacent districts would not be enormous, especially if the committee determine to appropriate a fair and reasonable portion of the invested money of the charity to obtaining the best position available, and providing a hospital adequate to the requirements of South Devon and East Cornwall.

THE DENTAL DIPLOMA.

THE postponement *sine die* of the discussion of the recommendations of the Committee on the Dental Diploma will afford the Council of the Royal College of Surgeons an opportunity for a reconsideration of the relations of surgeons and dentists. It is certainly an anomalous circumstance that any branch of surgery should require a special diploma. According to the terms of the recommendations of the Dental Committee, as set forth in the last Report, the dental licence is to be deemed a sufficient qualification for a lectureship on dental surgery and for the post of surgeon to a special dental hospital or the dental department of a recognised general hospital. Still worse, it is proposed that, in future, certificates shall not be received from teachers of dental surgery unless they hold the licence of the College. In other words, Fellows and Members of the College who are not also licentiates in dentistry are to be disqualified from practising dental surgery.

CONTAGIOUS DISEASES ACTS.

THE Assistant Commissioner of the Metropolitan Police has made his report to the Home Office on the operation of the above Acts during the past year, 1876, and it has been printed for the House of Commons. Captain Harris states that the police specially employed under the Acts have discharged their duties to his entire satisfaction, and that no complaint, with the exception of the charge against Inspect Annise, in the Plymouth district, has been brought to his notice; and we know what was the result of a most carefully conducted inquiry into that case—viz., that the charge was proved to be wholly groundless, and dismissed on the unanimous decision of a full bench of magistrates. Seventy-four young girls, between the ages of twelve and eighteen, the like number between the ages of eighteen and thirty, and five above that age, have been rescued; upwards

of 140 individuals, who had commenced an immoral life, abandoned it on having been cautioned by the police. The number of brothels has been reduced by 745 since the Acts came into operation. During the year, 81 of these unfortunates have married, 231 have entered homes, 567 have been restored to their friends, and 20 have died. The continued efforts of the police employed in carrying out the Acts are directed to the reclamation of young girls and the prevention of others from adopting this course of life; and if results such as these are attained, to say nothing of the diminution of disease, we must consider it evident that the working of the Acts is beneficial.

THE VENTILATION OF KEYHAM FACTORY.

AT an inquest on the body of a man named Edward Owen, who died in a stove in the moulding department of the factory, on the 6th inst., the foreman of founders in Keyham yard gave some very astonishing evidence with regard to the ventilation of the foundry. He said that both he and the chief engineer had for many years been of opinion that it ought to be better ventilated; that the shop became full of noxious gases whenever the wind blew in certain directions, because of the peculiar construction of the chimneys, and that, moreover, on the day in question, one chimney only could be used, as the other was under repair. As the coroner, the jury, and Dr. Row, who made the post-mortem examination, agree that Owen's death was caused by the inhalation of these poisonous gases, for no trace of disease was present, and the lungs were intensely congested, we assume the Government will take every precaution to prevent the recurrence of a similar disaster. Indeed a promise has been given to that effect, though the terms in which it was couched are not so full or clear as the case seems to require. Meanwhile, if the chief engineer was aware of the defects of the ventilating arrangements, and pointed them out to his superiors, we think the jury might have inquired a little further than they did, and discovered to whom the neglect of providing a remedy for a well-known evil was attributable.

THE METRIC SYSTEM IN PRESCRIPTIONS.

OUR contemporary, the *New York Medical Record*, has recently drawn attention to the exceeding inaccuracy of the troy weights in common use amongst apothecaries and pharmaceutical chemists in America. On examining a set of grain weights, sold by a prominent firm, the following results were obtained. The nominal quarter-grain weight weighed ·35 gr., the half-grain ·90 gr., the one-grain 1·10 gr., the two grain 2 gr. Hence, of these four, but one was correct. The others were respectively 10 per cent., 40 per cent., and 80 per cent., over weight. These weights were of German manufacture. Another set (American make), consisting of thirteen pieces, were found to be reasonably accurate, the error in none exceeding 2 per cent. At another place a nominal weight of three grains was found to weigh 3·15 gr., one of four grains 4·35 gr., and one of six grains 5·10 gr. At this place a small German saddle scale was found graduated from ·1 to 5 gr., in which the arm carrying the saddle was ·2 gr. lighter than it should have been; consequently if half a grain of morphine had been ordered ·3 gr. would have been supplied. At another place the weights were found to be as they should be, whilst at a fourth place the proprietor declined to allow his weights to be examined, alleging that he knew they were all right, as they had been in use several years. The writer of the article from which the above remarks are quoted says, very justly, that, as it is perfectly practicable to detect a difference between different weights of 1 5000th of a grain, a decent approximation to the standard may fairly be demanded.

RECOVERY FROM DROWNING.

THE Royal Humane Society would do wisely to amplify its instructions for the recovery of persons supposed to be drowned; or, perhaps, it would be better to issue a new series for the use of unskilled operators—for example, the police of seaport towns and watering-places. It would be difficult to imagine measures less likely to promote recovery than the following:—Lying the body on a table with the head and shoulders raised on a pillow, drawing out the tongue, so that the orifice of the windpipe is exposed, and pouring brandy-and-water into the mouth, while the subject of this strange proceeding is incapable of swallowing. The pharynx and trachea of course become filled with the fluid, which goes no further. It is probably after such a proceeding a matter of indifference that the upward and downward movement of the arms, made to flap like fins, do not in the least degree affect the thorax. The muscles are flaccid in the state of collapse, and no motion is communicated to the chest through their agency. It would surely be well to return to the method recommended by Marshall Hall, which is so simple that the most inexpert operator can hardly fail to promote the mechanical movements of respiration, while the frequent change of position must of itself clear the throat. This is the season when especial care should be bestowed on a subject fraught with so much interest, and on the right comprehension of which the issue of life or death often depends.

THE VICTORIA AND BELGRAVE HOSPITALS FOR CHILDREN.

WE are glad to learn that the Duke of Westminster, President of the Belgrave Hospital, is to preside at a special general meeting of the governors on the 25th instant, when the subject of the immediate amalgamation of the Victoria and Belgrave Hospitals on the site of Gough House will be reconsidered. By their subsequent action the committee of the Belgrave Hospital have shown a dignified disapproval of the unrepresentative character of the meeting of governors on the 4th instant. His Grace has always been so staunch a friend to the Belgrave Hospital, has taken so kind an interest in the Victoria Hospital, and has been so warm and consistent an advocate of the scheme for their amalgamation, that that desirable end need not yet be despaired of. Our notices of the subject in 1875 render it unnecessary for us now to do more than repeat that the amalgamation is dictated in the interests of real charity. The proximity of the two hospitals materially cripples the efforts of each, and renders their continued separate existence undesirable and extravagant, if, indeed, it be not impossible. We would remind the friends of the Belgrave Hospital that to maintain it in an efficient manner, on its present scale, must entail a comparatively lavish expenditure with but insignificant results.

THE DOMESTIC ECONOMY CONGRESS.

THIS Congress, which was promoted by the Society of Arts, commenced by a *conversazione* at the rooms of the Society of Artists, Birmingham, on the evening of the 17th inst., under the presidency of the Mayor, in the unavoidable absence of Lord Leigh, who was prevented from attending by an accident to his son. Professor Huxley delivered an address, in which he said he had long been impressed with the importance of the subjects to be discussed at the Congress, and he was glad to see that public opinion was beginning to take a different view of what education ought to be, and to recognise the importance of teaching a man to understand his social duties.

On the following day, in Section 13, which was presided

over by Dr. Heslop, Professor Huxley read a paper on Elementary Instruction in Physiology, in which he advocated the universal teaching of elementary anatomy and physiology, based upon observation, eked out by good explanatory diagrams, and conveyed by a teacher whose knowledge had been acquired by study of the facts, and not the mere catechismal parrot-work which often usurped the place of elementary teaching. He deprecated the action of the Vivisection Act, although he would do his best to oppose the infliction of needless pain in the use of physiological researches.

SUIT FOR RECOVERY OF FEES BY A FELLOW OF THE COLLEGE OF SURGEONS.

FELLOWS of the College of Surgeons have one advantage over Fellows of the College of Physicians—they are not precluded by the bye-laws from suing in a court of law for professional aid rendered by them. It would seem hard after a Fellow had brilliantly extracted a stone or a cataract if an unprincipled and ungrateful patient should be able to refuse payment with impunity. Mr. John Wood, senior surgeon of King's College, was lately the plaintiff in an action to recover from the defendant, Mr. Mathias, the balance of an account for surgical services rendered to the plaintiff's wife. This lady underwent two operations, which ultimately proved successful. The defendant having paid the plaintiff £50 for the first operation, except as to £20, which he paid into court, refused to pay the balance, which consisted of £20, for the second operation, and seventy-five guineas for seventy-five visits consequent upon it. The patient lived in lodgings near Mr. Wood. The counsel for the defendant had no evidence to show that the charges were improper. The only point in the defence was that the defendant had no notion beforehand that these would be the plaintiff's charges. The Lord Chief Justice of England directed the jury that this was no defence—the defendant ought to have inquired. The jury, a special one, accordingly found a verdict for the plaintiff.

THAMES VALLEY DRAINAGE.

A SELECT Committee of the House of Lords has recently been sitting to examine the provisions of a Bill to confirm the provisional Bill of the Local Government Board for forming a joint board for carrying out the sewerage of the lower Thames Valley. After hearing counsel and evidence for three days, the Committee resolved to recommend the confirmation of the Order, which will thus unite for drainage purposes the districts of Ham, Hampton Wick, East Molesey, Kingston, New Malden, Surbiton, Teddington, Esher, Richmond, Kew, Barnes, and Mortlake. It was sought to include Twickenham, but the district resisted the proposition, and successfully. Two years are allowed to carry out the scheme, pending which time penalties are in abeyance.

CLUB REMUNERATION.

THE letter from Dr. D. Henry Monckton, which we publish in another column, calls for special notice. The question of remuneration for medical attendance on members of clubs has gradually become larger and more pressing. In many instances the fees which are now paid are exactly the same as they were twenty years ago, notwithstanding the increase in the wages received by the members and the improved financial condition of most of the clubs. Any attempt to ameliorate the scanty pay of the medical attendant should, therefore, be well supported. The members of the clubs are for the most part by no means indisposed to accede to a demand for better remuneration, and would, we believe, at once grant it if the medical officers could show that many of the best clubs now pay five shillings a year. To promote this object we shall be most happy to publish a list of the clubs which pay their medical attendants this sum.

INFECTIOUS DISEASES AND THE SEASIDE.

AT this early stage of the season we impress on all happy convalescents from infectious diseases the kindness of not conveying infection about with them, especially to places of popular resort. We may remind the few who cannot be influenced by this consideration that the premature exposure of themselves is now a serious offence in the eye of the law, by which many persons might be aggrieved. We trust that medical men will use their influence to deter their patients from such conduct. In the case of convalescents from small-pox and scarlet fever especially, medical men have a very urgent and very plain duty to discharge—to impress on their patients that till every pustule and scale is cleared off and the clothes are disinfected they are bound to stay at home. Finally, we hope that the authorities of all seaside places will make a point of investigating, if not of prosecuting, every case of imported infection. This is no sentimental severity on our part. Our object is to prevent the recurrence of those painful instances in which families go out for their health and return with one of their number ill or dead.

CHARITY VOTING REFORM ASSOCIATION.

THIS Association has arranged for a special meeting of the governors of the Medical Benevolent College, in order that the practice of canvassing for votes may be fully and fairly discussed. The meeting will be held on the 25th inst., when the following resolutions will be proposed for adoption: (1) That it is expedient to prohibit the practice of canvassing for votes, and that therefore no application by the candidate, or parent or guardian of the candidate, for votes shall be allowed; and when it shall be satisfactorily proved to the Council that this rule has been infringed, the Council shall have the power to remove the name of the applicant from the list of candidates, and, if elected, to declare the election of such candidate void. (2) That all voting papers be sent by the voter himself direct to the secretary of the College, and that the signature of the governor, with date and address, be appended in full. We wish the promoters of this reform all possible success.

THE GOLDEN-SQUARE HOSPITAL.

AN inquiry into the medical management of this hospital was held on Saturday last, but the decision of the Committee of Inquiry has not yet been published. It is stated that the inquiry was held at the request of his Royal Highness the Prince of Wales, who nominated the Earl of Dunmore, and requested Sir William Gull to watch the proceedings; while the President, the Marquis of Bute, in consequence of indisposition, deputed the Duke of Grafton and the Earl of Clarendon to act for him. Although all the charges against the medical superintendent were not investigated, sufficient evidence was adduced to satisfy the Committee of Inquiry that the medical management must be thoroughly remodelled. It is not known what steps the committee are prepared to take, but it is safe to predict that unless some radical changes are made the hospital will lose some of its most important and influential patrons and supporters. We presume that the subscribers will assert their claim to consider the nature and propriety of any alterations which may be proposed. Meanwhile the profession is interested to know what are the sentiments of the remainder of the medical officers.

ROYAL COLLEGE OF SURGEONS.

FROM the last annual report of the receipts and expenditure of the College, which has just been published, it appears that the former amounted to £16,266 11s. 8d., derived principally from fees paid on the preliminary, primary, and pass examinations for diplomas of fellowship and membership of the College—viz., £12,372 10s.; rents from chambers adjoining the College and dividend on stock produced £2499 4s. 10d. The expenditure amounted to £15,681 2s. 1d., the largest item being for fees paid to members of council, courts and boards of examiners—viz., £6124 9s.; followed by salaries and wages for the large staff of officers and servants—viz., £3988 13s. 8d. For Government stamps (exclusive of postage), taxes, and rates, the large amount of £1250 2s. 10d. was required. Pensions are represented by £287 19s. 6d. For the Hunterian Festival and Oration, at both of which H.R.H the Prince of Wales was present, £230 4s. 6d. was absorbed; but this is partly covered by interest on the Hunterian Trust Fund, bequeathed by the executors of John Hunter, Sir Everard Home and Dr. Matthew Baillie, for the special purpose. The professors received for their lectures £144 18s. There appears to be a balance at the bankers of £585 9s. 7d.

PORT SANITARY WORK.

THE annual inspection of the port of London by the Port Sanitary Committee of the Corporation took place on Tuesday last. Mr. George Manners, the chairman, and most of the members of the Committee went from All Hallows pier to Gravesend, and visited the school-ship *Exmouth*, as well as their own hospital-ship *Rhin*. They were accompanied by Dr. Buchanan, Mr. Netten Radcliffe, Mr. Johnson Smith, Dr. Sedgwick Saunders, Captain Jenkins, harbourmaster, and other visitors, and were met on the *Rhin* by Dr. Whitcombe, who has charge of the ship. The company afterwards dined at the Rosherville Hotel.

EPSOM COLLEGE.

IN a recent number we called attention to the notice of a meeting at which it was proposed to establish an Epsomian Club for the occasional reunion of those who have been educated at Epsom College. We are glad to hear that the movement has been a complete success. The first meeting of the club took place at St. James's Hall on Wednesday, the 11th inst., and a very pleasant evening was spent. More than sixty were present, and it was announced that over one hundred old Epsomians had joined the club as original members. These large numbers speak well for the future of the club, and are a strong proof of the interest felt by the past scholars of the College in the welfare of their Alma Mater.

FIBRILLAR STRUCTURE OF HYALINE CARTILAGE.

TILLMANUS, in a late number of the *Centralblatt für die Chirurgie*, maintains that hyaline cartilage is to be regarded as belonging to the class of fibrous connective tissue. It differs from ordinary connective tissue, he maintains, only in containing a much larger amount of cement substance, and in the absence of vascular channels.

ILLNESS OF PRINCE ALBERT VICTOR.

PRINCE ALBERT VICTOR, eldest son of H.R.H. the Prince of Wales, is suffering under an attack of continued fever. The symptoms date from Saturday, the 7th inst.; hence it must be some days before there can be any important change for the better. The course of the disease has hitherto been very favourable.

HEREDITARY QUALITIES.

OF hereditary qualities none admits of less doubt than muscular vigour and athleticism. In the cricket field, the Lyttletons, the Graces, and the Walkers have put this fact beyond a doubt, and the race for the amateur championship of the Thames, which was decided on Monday, seems to show that skill in rowing is a distinctly transmissible quality. Mr. F. L. Playford, who was the winner for the third time, is the son of Mr. Francis Playford, of Staines, who won the Wingfield Sculls in 1849, and nephew of Mr. Herbert Playford, who was the champion in 1854.

THE second annual report of the committee of the Clapton and Darenth Asylums for Imbecile Children has just been published. The committee hope to transfer the children from Clapton to Darenth by midsummer, 1878. The average daily number at Clapton throughout the year has been 326; 44 have died, and 45 have been discharged. Great pains are taken with the school training and the industrial teaching, and the results are fairly encouraging. As the children must be transferred to the adult asylums at sixteen years of age, it is to be hoped that the managers of these asylums will take special care to continue the training, so as to give them every chance of becoming fit to earn their own living outside, or, at least, sufficiently advanced in habits of order and method as to be of use in the asylums. The medical history of Clapton Asylum during the past year shows nothing very special, except that scarlet fever, small-pox, and measles have all been introduced by the friends of the patients, accidents to which hospitals in such close proximity to London are peculiarly liable. The scarlet-fever and small-pox patients were sent away, and the diseases did not spread, but the cases of measles had to be treated on the spot, as they are ineligible for admission to the District Asylum Hospitals. Although there were forty cases, only one proved fatal, which speaks well for Dr. Beach's care and attention.

AT a meeting of the Health Committee of the Liverpool Town Council last week, the chairman described a condition of things in the neighbourhood of Mersey-street and Boundary-street which is simply appalling. On a space, consisting of 530 square yards—about a third of the area on which the Town Hall stood—he found forty-six dwellings, with the same number of privies, the contents of which might be fairly estimated at about eighty tons. In one house he observed the refuse of the midden, which had been receiving accumulations uninterruptedly for eighteen months, piled up against the kitchen wall. As, in his tour of inspection, the chairman (Mr. Forwood) was accompanied by the medical officer of health, no doubt this plague spot will receive the attention it undoubtedly deserves.

SIR M. HICKS BEACH has stated from his place in Parliament that the report of a Colorado beetle having been captured on the quay at Dublin turns out to be inaccurate. The insect captured, which gave rise to the report, proves, on being subjected to skilled examination, to be a small kind of beetle indigenous to the country.

DR. BASTIAN went over to Paris early in the week with the intention of submitting his experiments to the investigation of the Commission of the French Academy. M. Pasteur politely offered him the use of his laboratory, and we hope next week to be able to give details of the experiments.

A RECENT report, by Dr. Espinel, on the employment of gurjun oil in the treatment of leprosy, in the Leper Asylum of Trinidad, gives some encouraging results as to the decidedly alleviating action of this remedy upon the disease.

THE annual report of the Nightingale Fund has recently been issued, from which it appears that thirty-six probationer nurses were admitted into the school of St. Thomas's Hospital during the past year. A total of twenty-five completed the course of training and received appointments, six resigned, and six were discharged as unsuitable for the work.

ON Saturday last a service of plate was presented to Senor Manuel Garcia "in recognition of the great services he has rendered alike to science and humanity by his important discovery of the laryngoscope." The presentation took place at 21, Harley-street, Professor Huxley in the chair.

THE distribution of prizes for 1876 at the Medical and Surgical College in connexion with St. Thomas's Hospital took place on Monday, 16th. Sir Francis Hicks, treasurer of the hospital, presided, the Bishop of London presenting the awards.

THE INDIAN FAMINE.

The Times correspondent of Calcutta speaks in a more hopeful manner of the famine prospects in the Bombay Presidency. There the number of people on the relief works is somewhat diminished, rain having fallen more or less over the districts afflicted. The general state of the people is decidedly better, and it is hoped all cause of anxiety will soon cease.

In Madras the prospects are less cheerful, but are apparently improving. Dr. Cunningham, who was deputed by the Supreme Government to investigate the peculiar forms of disease among the famine-stricken people, has submitted an interesting report. He was unable to discover any form of fever which could be ascribed to the influence of want. He found fevers of any kind practically did not exist, deaths being almost entirely due to diarrhœa and dysentery. The general results of his researches confirm the belief that morbid conditions exist which may with propriety be termed famine diarrhœa and famine dysentery. Pathological changes, characterising these diseases, consist in softening and subsequent atrophy of the mucous membrane of the intestinal canal, due apparently to a process of fatty degeneration of the tissues, and leading to the destruction of the apparatus provided for absorbing nutritive material. These views entirely coincide with those taken some time previously by the sanitary commissioner of Madras, who, in his report to the Madras Government, pointed out that a slow process of starvation on insufficient rations simply reduced the sufferer to a state where the powers of assimilation cease to be exercised, and death ensues from famine diarrhœa and dysentery. The short ration experiment has, as we foretold at the time, been attended with grievous results. It is a pity the Government were induced to attempt it without first consulting the scientific advisers at its command.

These famines are a serious blot on our administration, and although they have arisen at recurring intervals as far as the memory of man reaches, we have ample evidence before our eyes that they are avoidable. Miss Florence Nightingale, in a very interesting letter to the *Illustrated London News* of July 7th, points out how irrigation works, where carried out, have entirely saved the district in which they exist from the scourge of famine, and its attendant plagues of cholera and fever. The districts of Tanjore, Godavery, and Kistnah at this present moment, instead of adding millions of inhabitants to the starving crowd, are revelling in plenty, and pouring into the suffering districts thousands of tons of food. These works—at least their initiation—were due to the foresight and almost genius of Sir Arthur Cotton, formerly of the Madras Engineers, who, if he had been allowed his way, would have converted each of the large rivers of Southern India into centres of irrigation, so that not only the Tanjore, Godavery, and Kistnah districts would at this moment have been free from starvation, but the whole of Southern India. The plans of Sir Arthur Cotton, although founded on calculations which defied criticism, were deemed by the Government of the day too hopelessly extravagant. He asked, if we remember rightly, something like sixteen millions, to store in capacious lakes, which were to be connected by canals for irrigation and traffic, the water which annually pours itself during the monsoon down the rapid and shallow rivers of the southern continent, into the Indian Ocean. The works already carried out in Tanjore and the Godavery have paid the money laid out on them over and over again, besides affording at the present moment the spectacle of a people enjoying abundance of food, whilst their fellow-countrymen further south are starving. The famine in Orissa is said to have cost the Government six millions, and this one in Madras and Bombay will most assuredly cost as much, if not more; so that the sum asked for by the man of science, which was to have been expended over many years' profitable labour, will almost have been expended unprofitably, except in a humane point of view, in trying to remedy what Sir Arthur Cotton's far-seeing policy would have altogether avoided. It is reported of George the Third that when some one remonstrated with him for promoting General Wolfe, he (the general) being mad, he replied, "I wish to God, then, he would bite some of my other generals." So of Sir Arthur Cotton, who was deemed by the Government of his time an extravagant visionary, and his plans treated accordingly, it now becomes a matter of sincere regret that he was unable to bite some of the then councillors. Over-centralisation is in some degree answerable for this. Sir Arthur Cotton was a Madras officer, intimately acquainted with the wants and capabilities of his own Presidency. His schemes had to be judged and decided upon in Bengal. The lesson, although a sad one, should be full of instruction to the Government for future guidance.

THE RUSSO-TURKISH WAR.

OPERATING CASE.

WE have received from Mr. Hawksley, of Oxford-street, a sample of the case of operating instruments similar to those that have been forwarded to Turkey for the use of the English surgeons sent out from this country to the aid of the wounded. The case is a very good one, and merits the attention of all likely to be engaged in military surgery, in consequence of its contents having been selected with care and judgment, and with a practical knowledge of the requirements of a campaign. In addition to amputating knives and saws, scalpels, straight and curved bistouries, forceps of various kinds, and other instruments that are essential in such a collection, we observe a really useful probe, with porcelain end, on Nélaton's principle, and adapted for use in cases of deeply penetrating gunshot wounds, good torsion forceps, bullet forceps, hypodermic syringes (after the Middlesex Hospital pattern) and morphia discs, a clinical thermometer, ebonite syringe for wounds, &c., with suture needles and harelip pins preserved in lime against rust. There is a small tray which on removal discovers bone forceps and other instruments; and beneath that portion of the case appropriated to instruments is a drawer containing a number of articles and appliances of various kinds and suitable for field surgery—to wit, plaster-of-Paris bandages (in air- and water-tight cases), chloroform bottle, Esmarch's ligature bands, elastic and ordinary bandages, drainage tubing, and so on. We must not omit to mention that there is a hone for sharpening instruments (and Mr. Hawksley offers, by the way, to instruct any surgeon going to Turkey in the art of setting his knives). The case is strong and simple in construction to save expense, and the list of instruments seems very well adapted indeed to the end in view. We think it would be well, in this and every case of the kind, that at least one of the knives should be very strong, of moderate length, and with a good back running nearly up to the point, for use in operations about the tarsus and scarpus. We have some doubt however, whether any wooden case uncovered by leather would stand the wear and tear of field work.

NEW INFECTIOUS DEPARTMENT AT THE CHILDREN'S HOSPITAL, BIRMINGHAM.

THIS department, recently erected at the rear of the main building of the Children's Hospital, consists of four wards, and a nurse's house, in which accommodation is provided for a sufficient number of nurses in a block entirely isolated from the main hospital; a wash-house and laundry, in which the ward linen, &c., can be cleansed and kept entirely separated from that in use in the main building; and a mortuary, comprising a small reception room and a larger roof-lighted room, the latter being for the purpose of post-mortem examinations. The walls of the mortuary are enamelled bricks, and the floor is asphalted. The wards consist of a reception or quarantine ward, the dimensions of which are—length 20 ft., width 16 ft., height 14ft., and is intended to contain three cots. A ward for cases of croup and diphtheria 20 ft. long, 20 ft. wide, and 14 ft. high, for four cots. There are two fever wards, each being 40 ft. long, 20 ft. wide, and 14 ft. high, and each holding ten cots.

The wards are built of best red bricks, and the interior walls are covered with Minton's enamelled tiles of different shades of light yellow, square and hexagonal alternating, the patterns being divided by an ornamental brick band.

The ventilation is, by means of a shaft carried above the ceiling, and terminating in a brick flue. A perpetual upward current is occasioned by means of a gas-jet in the ceiling. The fresh air is admitted over the windows by means of perforated iron facim, and these latter are kept under control by means of a fall, hinged and worked with a cord. In addition there is fresh air admitted through grids in the floor line, passing between the hot-water coil pipes. These pipes, of which there are four sets in each of the fever wards, and two in each of the smaller wards, are protected by an ornamental iron screen, and are covered with marble slabs. In addition to these pipes the wards are provided with an open fire-grate.

The floors are of oak, dowelled together, so that no nails are visible. The remainder of the woodwork is of best selected deal, stained and varnished. All windows, doors, and other mouldings, have been specially designed not to harbour the dust, &c. Each fever ward is provided with a bath-room, w. c., and lavatory, the latter being accommodated with hot and cold water service. The two smaller wards have a w. c. and a lavatory only.

The drainage has received special attention. The water from the roofs is conducted into a large iron tank and used for laundry purposes. The connexion between the tank and the building is cut off by means of a trap. The waste water from baths, closets, and lavatories is conducted by separate pipes into the main sewer; the connexion between the pipes and the sewer is cut off by means of a brick trap, provided with a large ventilating shaft. Flushing tanks have been provided at the highest points of the drains, to allow of periodical flushings. The waterclosets are provided with Pott's traps. The department is in itself very complete, and is a very valuable addition to the charity.

Correspondence.

"Audi alteram partem."

THE LOCALISATION OF THE FUNCTIONS OF THE BRAIN APPLIED TO THE USE OF THE TREPHINE.

To the Editor of THE LANCET.

SIR,—In your issue of July 7th last (p. 21) there is an editorial article on the application of the new views on the localisation of the functions of the brain to the use of the trephine. Two cases in which that operation has been successfully performed by M. Terrillon and M. Lucas Championnière, guided by the new views on localisation, have attracted your attention, and you point them out, trusting that this important surgical question may be the subject of patient investigation by our younger surgeons.

There are two distinct points relating to the question of this application of the doctrine of localisation to the use of the trephine, which have not been discussed in your article. The first is whether the indications furnished by that doctrine, supposing it to be true, can really be of service. The second is whether that doctrine is true or not. It is clear that if the new views on localisation are to be rejected there is no need of discussing the first of those two points. As I hope to show that we must reject those views I will only say that in an admirable report on the papers of the above-named surgeons, read by Professor Gosselin,[1] in the name of a committee, to the Académie de Médecine of Paris, he has proved that very little, if any, use can be made of the new physiological doctrine of localisation as regards the application of the trephine to the cranium. Professor Gosselin establishes first that the new views change nothing as to the well-known circumstances which indicate the use or the non-use of the trephine. He then shows that, in cases of fracture with depressed pieces of bone, surgeons, instead of looking for the part of the cranium corresponding with the fissure of Rolando, will always be guided by the site of the wound and that of the fracture under it, to find where to apply the trephine. Thirdly, he examines the case of patients having had a blow on the head without a fracture, but presenting symptoms of loss of action of one of Dr. Ferrier's psycho-motor centres, and asks if then the trephine is to be used. To this question he replies "positively no": first because other parts of the brain than the convolutions can produce those symptoms, and secondly because a cure is possible without an operation; and he adds that, owing to the danger of the operation, there is a better chance of cure if the cranium is left unopened than if it is trephined.

I will leave to surgeons the examination of the various questions so ably discussed by Prof. Gosselin. What I wish to do now is to show that anyone who would be led to apply the trephine to the cranium simply by a supposition that there is a pressure upon a certain convolution, or group of convolutions, because certain symptoms appear, would commit a dangerous blunder. A patient, who was afterwards under my care in New York, had the good fortune to escape without much harm from an operation of that kind, but it would not be so always. Before coming to me that patient had been treated by a distinguished New York physician, who, led by the view that the third left frontal convolution is the seat of the faculty of expressing ideas by speech, had the notion that a cure for aphasia and epilepsy with some right hemiplegia (symptoms existing in that patient) might be obtained by trephining at the level of that convolution. An eminent surgeon consented to perform the operation. The dura mater was found healthy, and the two medical men, not pushing their boldness further, did not divide it. The patient fortunately recovered without any persistent bad effect from the dangerous traumatic injury inflicted upon her.

Not to give an undue development to this letter, I will content myself with some statements of facts bearing on the question of the existence of the so-called psycho-motor centres in the cortical substance of the brain. As we know that in a case of fracture of the cranium a lesion can be produced in any deep-seated part of the brain, as well as in the convolutions, and that if it occurs in the cortical substance of the brain it may as well be in a convolution far away from the seat of the fracture as in the one just under that seat, I am clearly entitled to make use of cases of disease in any part whatever of the brain to show that the paralytic or convulsive symptoms that may appear after a fracture of the skull, or a blow on the head, are not appropriate indications to lead to an application of the trephine in one place rather than in another.

The first argument I will employ is that *convulsions or paralysis may appear whether the lesion is in the special zone of the cortex cerebri, which is supposed to contain motor centres, or outside of that zone.* I add that these morbid manifestations can appear as well from lesions in parts of the brain not belonging to the radiations uniting the supposed motor convolutions with the corpora striata and the crura cerebri. In my lectures on Paralysis, already published in THE LANCET, I have shown by a great many facts that a lesion located in the posterior or the sphenoidal lobes, or in the

[1] Bulletin de l'Académie de Médecine, No. 14, séance du 3 Avril, 1877, p. 370 et seq.

anterior or middle lobes outside of the supposed voluntary motor apparatus, and also a lesion in the optic thalamus, in the cerebellum, &c., even where no pressure can be exerted on other parts of the brain by the diseased tissues, can produce paralysis, and not rarely even a complete and persistent one. So it is with convulsions, which we find to be caused just as well by disease of supposed non-motor as by lesions of the supposed exclusively motor parts of the brain.

The second argument I will use is the counterpart of the preceding; it is that *all sorts of morbid alterations, irritative or destructive, occupying the whole or a part of the cortical motor zone or any other part of the encephalic voluntary motor apparatus, may exist without producing either paralysis or convulsions.* In my third lecture on Paralysis, which will soon appear in THE LANCET, I will give a great many facts showing that paralysis may not be produced even in cases of extensive disease of either of the three lobes, or of the ganglions, or of the base of the brain. I will only now, without giving details, state that there are on record cases of destruction or great alteration of the so-called psycho-motor centres on one or on both sides without any marked paralysis. Indeed, there are most important cases of considerable alteration of the cortical substance, not only of that of those parts of the anterior and middle lobes considered as containing the motor centres, but also of that of almost all the other parts of the two cerebral hemispheres, without any evident paralysis. Such are cases published by Gama, Lenormand, Billard, Lécorché, Chambert, Abercrombie, Dr. Elam, Brière, R. Bright, Belhomme, Simms, &c. To these cases of disease of almost all the convolutions on both sides of the brain I might add cases in which a considerable pressure was exerted on the surface of a great part of the two cerebral hemispheres, or of local alteration in a great many parts of the convolutions, without any marked paralysis. Such are cases given by the following observers, some of whom believe in localisation: Sir William Gull, Professor P. Broca, Huguenin, Marcé and Luys, Rogerson, Dugast, Gintrac, &c. As regards convulsions, there were none in most of these cases, so that it is clear that a considerable alteration of the pretended psycho-motor centres may exist without any marked paralysis or convulsions.

A considerable alteration, and in a great measure a destruction, of tissue, with more or less extensive irritation of surrounding parts, may exist in two lobes, or in almost the whole of one hemisphere, without any marked paralysis or convulsions. Cases showing this are more numerous than anyone who has not specially examined the subject may be ready to admit. I shall soon publish some details of a number of those facts. I will simply now name the following authors who have put them on record. As regards cases of disease of a great part of one hemisphere without paralysis, I will name the following observers, some of whom are very distinguished men:—Dr. H. Day, Abercrombie, Porta, Dr. R. Quain, Thibaut, Pasquet, De Fleury, Dr. J. W. Ogle, Anger, Alègre, W. Roberts, Porral, Alex. Thomson, Pédelaborde, Prof. Richet, Spessa, Prévost and Cotard, Boudet, Lagrange, Mr. Callender, Robert, &c. In most of those cases no convulsions took place. I could lengthen this list considerably, especially if I added to it the names of authors having published cases in which there was but an incomplete paralysis notwithstanding an extensive atrophy of one hemisphere.

I will merely say also, that *disease of the two anterior or the two middle lobes, of the two corpora striata, of the pons Varolii or the medulla oblongata, as also disease of one of the crura cerebri, can exist without marked paralysis or convulsions.* I will only name now some of the authors who have published cases of alteration of the two anterior or the two middle lobes, or the two corpora striata, without marked paralysis. In some only of those cases convulsions have been noticed. I will first give a list of authors of cases of disease of the anterior lobes: Mr. Prescott Hewett, Velpeau, Dr. Banks, Berger, Berghmann, Campana, Gama, Dr. Jamison, Sir G. Burrows, W. Roberts, Dr. A. Leith Adams, Bosc, Cordier, Marcot, Breschet, De Castelnau, J. H. Drawbridge, Trousseau, Avonde, Blaquière, and Baraduc.[2]

[2] No doubt in a number of these cases of disease of the two anterior lobes the ascending frontal convolution may have escaped; but there is no doubt also that the disease, in some cases at least, extended to, and even went beyond, the fissure of Rolando, so that a good part of the pretended motor zone was injured or destroyed.

The following is a list of authors who have recorded cases of disease of great parts of the two middle lobes or of both corpora striata, without any marked paralysis, and generally without convulsions: Broussais, Collin, Carron, Siredey, Lallemand, Fabre de Puch, Lesserré, Mr. Jonathan Hutchinson, Troisier, Abercrombie, Durand-Fardel, Andral, Dr. J. H. Bennett, Gintrac, Dr. J. W. Ogle, Aran, Dubruel, Müller, and others.

The third argument is, that *local paralysis or convulsion (face, arm, or leg alone) may appear, whether the lesion is in some part of the voluntary motor apparatus or outside of it.* Indeed, the number of cases in which there has been local paralysis of either the face or the arm from disease of parts outside of that apparatus is greater than the number of cases of these two kinds of local paralysis caused by a lesion of the so-called psycho-motor centres. The same thing, as regards the arm and the leg, is true also for convulsions. I may go farther, and say it is a question whether local or general convulsions in cases of disease of the cerebral convolutions do not always depend, in a great measure at least, on the irritation of the meninges.

The fourth argument is, that *paralysis or convulsions of the arm alone or chiefly, in cases of disease of the convolutions, may appear when the lesion occupies the seat of the pretended psycho-motor centre for the leg.* There are many cases showing this.

The fifth and last argument is, that *unilateral paralysis or convulsions may appear on the side of the lesion in the brain.* This I have fully shown as regards paralysis.[3] I will merely say now that unilateral convulsions on the side of the lesion are extremely frequent. If, when the lesion is in the left half of the brain, *cross* convulsions exist in most cases, we find, on the contrary, that the number of cases of *direct* convulsions is much larger than the number of cross convulsions when the lesion is in the right side of the brain. Out of 322 cases of unilateral convulsions from brain disease that I have collected, there are 184 allied with lesions in the right hemisphere, and 138 with lesions in the left. Of the 184 there are 110 cases in which the convulsions occurred in one or in both limbs on the right side, and 84 in which they took place on the left side; so that it is clear that unilateral convulsions appear much more frequently on the side of the lesion than on the opposite side when the right side of the brain is the seat of the lesion. Not so when the left half is diseased; as, out of 138 cases, the left limbs were convulsed only in 31 cases, and the right limbs in 107 cases.

I might bring forward many other decisive arguments against the views that paralysis and convulsions may show where there is disease in the convolutions of the brain or in the radiation from these superficial parts towards the crura cerebri, but I trust that what I have said is quite sufficient. I hope that no surgeon will venture to open the cranium, and make a patient run the risk of a traumatic meningitis or septicæmia, on the mere suspicion that if he is attacked with paralysis or convulsions localised in the arm or the leg, or the face alone, after a blow on the head, it is that some lesion exists along the fissure of Rolando or its neighbourhood. I hope also that the place of application of the trephine, when it is found necessary to make use of that surgical means in a case of fracture of the skull, will be selected according to the classical rules for such an operation in such cases, and not on the more than doubtful significance of symptoms that may depend on disease located not only very far from the place where it may be supposed to exist, but on the other side of the brain than that of the fracture. Believe me, Sir, yours truly,

C. E. BROWN-SÉQUARD.

Lewes-crescent, Brighton, July 14th, 1877.

[3] See THE LANCET of January, 1876, and of April and May, 1877.

THE UNIVERSITY OF LONDON AND MEDICAL WOMEN.

To the Editor of THE LANCET.

SIR,—As the first paragraph of your leader of Saturday last seems to have been written under a grave misapprehension of the intentions of the Senate in regard to the conditions under which they have resolved to admit women to degrees in medicine, I must request your permission to be allowed to give a correct statement of the case.

The Senate, in adopting the report to which you refer,

committed itself absolutely to the principle that the existing regulations in regard to medical degrees shall apply without distinction of sex, in accordance with the power conferred by the Act 39 and 40 Vict., cap. 41. You, on the other hand, impute it to the Senate that it is their intention to modify those regulations in the case of women; such modification having reference in the first place to the admission of certificates of study in foreign medical schools; and, secondly, to the admission of women who are already in practice, or who commenced their medical studies before January, 1875, under less stringent conditions than those who may hereafter enter.

The existing regulations (Calendar, p. 138) provide that every candidate for the M.B. degree shall have studied during four years at one or more of the medical institutions or schools recognised by the University; one year, at least, of the four to be spent in one or more of the recognised institutions or schools in the United Kingdom. This regulation, allowing every male candidate to spend *three* of his *four* years of medical study in a foreign school, has existed *from the very commencement of the University*. And though no list of recognised foreign schools has ever been published, it has always been understood that certificates would be accepted from Paris, Berlin, or Vienna, the only foreign schools from which, in my twenty-one years' experience, such certificates have ever been presented.

Thinking it not unlikely, however, that female candidates might present certificates from other foreign schools, and not wishing to take upon myself the responsibility of either accepting or rejecting such certificates, I suggested to the committee by which the report was framed the desirability of framing a list of medical schools from which certificates should be received; and this proposition has been adopted by the Senate. Any such list of recognised schools will be equally applicable to all candidates, and will be perfectly in harmony with the existing regulations.

So, again, the admission of the two classes of female candidates already referred to, under such remissions of the regulations as the Senate may deem fit, in regard to "places, order, and modes of study, and exemption from the matriculation examination" (*not*, be it observed, from any of the proper *medical* examinations), is strictly in accordance with the previous practice of the University in regard to male candidates. I send you the regulations which still remain in force (though they have practically died out), in regard to those candidates for the medical degrees of the University who were either (1) in practice prior to 1840, or (2) had commenced their medical studies in or before January, 1839. Each of these classes of candidates was exempted from the matriculation examination, and the conditions in regard to "places, order, and modes of study" were very considerably relaxed.

Dr. Storrar (the chairman of Convocation) came in under the first of these categories; Sir Wm. Gull and Sir Wm. Jenner under the second. Several such candidates were admitted to examination for the medical degrees during the earlier years of my registrarship.

It is obvious that women are now in the same position as regards the medical degrees of the University as men were when those degrees were first instituted in 1840.

Exemptions of a kind more or less similar were granted by the Senate when degrees in science were first instituted, and when the law degrees were placed on a new basis.

The determination of the Senate that no modification whatever shall be made in the regulations on account of sex is shown by its non-acceptance of the proposition to which reference is made in the second paragraph of your leader, the large majority of its members agreeing with you in opinion that "no one should become a possessor of a London University degree in medicine unless he or she has received an all-round medical education."

I remain, Sir, your obedient servant,

WILLIAM B. CARPENTER.

University of London, July 16th, 1877.

*** We have few comments to make on Dr. Carpenter's letter. Every statement in the first paragraph of the leader to which he alludes was derived from the report of the committee. Dr. Carpenter's letter shows that important modifications are to be made in favour of those women by whose agitation the dissension between the Senate and Convocation has been brought about. One inaccuracy occurs in Dr. Carpenter's letter. He quotes Dr. Storrar's name as an instance of those who were exempted from matriculation because they were in practice prior to 1840, and then says that degrees were first instituted in 1840. Dr. Storrar became a graduate of the University in 1839.—ED. L.

VARIOLA AND VARICELLA.

To the Editor of THE LANCET.

SIR,—I feel much satisfaction in thinking that the profession is in any way indebted to me for the publication of Dr. Sharkey's most interesting case. When I read my paper before the Clinical Society, some fears were expressed lest the public mind might be unsettled from its present state of serene composure by the promulgation of such views, and some objection was raised to the expediency of restarting the discussion of a subject which had been finally settled many years ago. In dissenting from this line of argument, I took occasion to remark that nothing can be more important than to take out old beliefs occasionally and see whether they are not decaying under the influence of time. If anything occurs to shake our faith in the value of an old institution, let us boldly challenge its efficacy at once, and let the truth come out, unharmed, as it always must, from the ordeal. When Mr. Hutchinson produced his now classic paper on Vaccino-Syphilis, some timid conservatives were apprehensive of the public faith, but time has shown how much science has gained by this addition to our knowledge. I hardly venture to compare great things with small, but in this discussion on varicella and variola, we have secured, at all events, the possession of this very important piece of evidence from St. Thomas's Hospital. Here there can be no doubt that small-pox so rapidly followed varicella as to indicate clearly the working within the system of the two poisons at the same time. But may it not be possible that a previous attack of a specific disease may be so specially slight as not to interfere with the overwhelming influence of a subsequent stronger dose? or may it not, under exceptional circumstances, even assist the subsequent operation of the infection by leaving behind it some unexhausted germ? All that Hebra asserts is, that chicken-pox will not invariably breed true, but will occasionally revert to small-pox, from which it may originally have been derived; and this peculiarity, he holds, may also depend on the soil which receives the contagious germ. Roseola, or spurious measles, will reproduce itself in its own kind fifty or sixty times, and the sixty-first may, as I have seen, turn out to be a true case of the major disease. May not the same analogy hold good between variola and varicella?—and if so, Dr. Sharkey's paper does not effectually settle the question. Another point of interest in the case is the demonstration of the acknowledged fact that vaccination has no protective power in the absence of a fully-developed areola, and that it requires a clear start from the incubative stage of small-pox in order that this special indication of safety may be produced.

I am, Sir, your obedient servant,

Brook-street, July 16th. R. FARQUHARSON, M.D.

CLUB REMUNERATION: A SUGGESTION.

To the Editor of THE LANCET.

SIR,—Early in last year (1876) I saw an opportunity of inducing my clubs to raise the annual payment per member from 4*s.* to 5*s.*

I was aware that in 1868 a committee of the Birmingham branch of the British Medical Association, under the able lead of Dr. Heslop, had inquired into this question, and had gained the support of the daily press to their own unanimous decision that 5*s.* should be the minimum sum accepted by the medical officers of clubs. In my own immediate vicinity Drs. E. T. and J. H. Tylecote had distinguished themselves by their advocacy of this and other reforms in sick assurance societies. I wrote, therefore, to a considerable number of my professional brethren in Birmingham and this district asking for a return of any clubs then paying their medical officer 5*s.* or upwards per head per annum. All replied courteously, and it was noteworthy that each, while regretting

the general failure of the efforts above named, could tell of one, two, or three cases in which the payment had been raised to or beyond the above minimum, and that plainly as a result of the above-mentioned efforts, proving to my mind the steadily advancing success rather than the failure of the exertions of our professional reformers in this direction.

Armed, therefore, with a goodly list of clubs doing the right thing to their doctors, I appealed to all my own, and found them well aware of the movement in Birmingham and elsewhere, and quite ready to recognise my claim; and the result is that all now pay me 5s., and these are contracts which I took from my predecessor twenty-three years since at 2s. 6d. each, and which I have got raised successively to 3s., 4s., and 5s.

It appears to me, therefore, that in many cases, if not all, what is required in dealing with these clubs is, first, to give steady, careful, honest attention to the members in sickness; second, to ask that such services may be properly paid for, producing in support of such claim evidence of the amount demanded being paid by very many societies.

It has further occurred to me that in this last particular you may render valuable aid to the profession. Should you, Sir, see fit to open your columns to a list of sick assurance societies paying their medical officers five shillings or upwards (with or without the names of the surgeons attached), it would afford valuable assistance to those seeking a similar advance, and save them much time and trouble in collecting such information as they would thus obtain at a glance from your weekly issue. As a commencement I append below a schedule of some 26 clubs. If you approve of my suggestion, you will, of course, solicit additions to the list from your readers. I am induced the rather to hope that you will accede to my request by the recollection of the great service rendered to our profession in a similar way by THE LANCET in the days of the elder Wakley, who, by the publication of a list of insurance societies paying fees to their medical referees, secured for us the full recognition of our claims to such payment which now happily obtains.

I am, Sir, yours faithfully,

Rugeley, Staffordshire, July, 1877. D. HENRY MONCKTON.

List of Working Men's Sick Clubs paying their Medical Officers Five Shillings or upwards per Member per annum.

NAME.	LOCALITY.	AMOUNT PAID.	MEDICAL OFFICER.
Lord Ingestre Lodge, Odd Fellows, Manchester Unity	Weston-on-Trent, Staffordshire	5s.	Dr. Tylecote
Lord Harrowby Lodge, O.F., M.U.	Sandon	5s.	"
Sandon Men's Sick Club	"	5s.	"
Lond. and N.-West. Railway Servants' Friendly Society	Colwich	5s.	"
Meynell Ingram Lodge, O.F., M.U.	Yoxall	5s.	C. G. Armson, Esq.
Lord Leigh Lodge, O.F., M.U.	Nethertown	5s.	"
Odd Fellows' Lodge, Staff. Unity	Kings Bromley	5s.	"
Sick Club	"	5s.	"
" "	Hamstall Ridware	5s.	"
Anglesey Lodge, O.F., M.U.	Rugeley	5s.	J. H. Freer, Esq.
Offspring Lodge, O.F., M.U.	Longdon	5s.	"
Earl of Uxbridge Lodge, O.F., Staff. U.	"	5s.	"
Lord Ingestre Lodge, O.F., Not. O.	Brereton	5s.	"
Earl Talbot Lodge, O.F., Staff. U.	"	5s.	D. H. Monckton
Oldham Lodge, O.F., S.U.	Colton	5s.	"
Chadwick Lodge, O.F., S.U.	Mav. Ridware	5s.	"
Hanscore Lodge, O.F., S.U.	Armitage	5s.	"
Star Friendly Society	Rugeley	5s.	F. J. Gray, Esq. J. H. Freer, Esq. D. H. Monckton
Fairoak Colliery Sick and Accident Club	" "	5s.	F. J. Gray, Esq.
Foresters' Court	Alcester, Warwickshire	6s.	T. H. Smith, Esq.
Odd Fellows' Lodge	" "	5s.	"
United Patriots	" "	5s.	"
Victoria	" "	5s.	"
Sir Tonman Mosley Lodge, O.F.	Burton-on-Trent, Staffordshire	5s.	G. Lowe, Esq.
Christian Union Society	" "	5s.	"
Odd Women's Club	Abbots Bromley "	5s.	R. Earlam, Esq.

ON THE

TREATMENT OF OBSTINATE SCIATICA.

To the Editor of THE LANCET.

SIR,—If there is any practitioner unacquainted with the difficulty of treating some cases of sciatica or other neuralgias, he need only refer to the subject in Tanner's Index of Diseases to find that almost every drug in the Pharmacopœia is given as a remedy. My experience of neuralgia of the sciatic nerve was limited to a few cases caused by intestinal accumulations, and easily removed by a couple of doses of croton oil, till I met with the case the notes of which are subjoined.

W. A——, aged fifty-four years, of full habit of body, is an engine-fitter by trade, and has been much exposed of late to wind and rain. Though not of intemperate habits, he consumes a good deal of spirits during the day while following his occupation. He has never suffered from any severe illness, nor has he had acute rheumatism or syphilis.

On April 1st I visited him, and found him suffering from acute pain in the calf of the leg, with slight pain in the hip and thigh. Aperients had been taken before I was summoned, I therefore at once treated him with anti-rheumatic remedies and mustard baths. In a few days he was able to go out, and, at my recommendation, went to take Turkish baths at Southport. He was, however, satisfied with one bath, and nothing could persuade him to give them another trial.

I now lost sight of him till August 28th of the same year, when he sent for me again, being nearly four months since I saw him before. He informed me that he had never been free from pain, although he had followed his work as well as he could till now. I found also that, in the meantime, various remedies had been tried—frictions, rubbers, magneto-electricity, charms, &c.; but with no relief of suffering. I ordered alkalies and opiates (iodide of potassium forming the chief ingredient). Frictions with anodyne liniments, mustard baths, &c., were used at the same time.

Sept. 3rd.—No relief of symptoms. Injected hypodermically into the calf a quarter of a grain of acetate of morphia, and repeated it in the evening.

11th.—Up to this date I continued to inject a quarter of a grain of morphia night and morning, but the pain returned directly the effects of the morphia passed off; the ease was not so apparent as at first, and the effect passed off sooner. I now ordered small doses of strychnia instead of alkalies, thinking probably the nutrition of the nerve was at fault. I also now tried small blisters over the course of the nerve from its origin down to the foot, allowing one to heal and then placing another below till the ankle was reached; at the same time continuing the hypodermic injections, using one-third of a grain for a dose.

22nd.—Pain less severe, but very acute after the effects of the morphia have passed off. Ordered aconitia mixed with lard to dress the blistered surfaces.

30th.—Although the morphia injections give relief, we seem as far off a cure as ever. The patient begins to think that he will require his night and morning pricks as long as he lives. Ordered bromide of potassium with morphia hydrochlorate and infusion of gentian.

Oct. 9th.—Patient seeming improved in health, the injections have been continued daily night and morning since Sept. 3rd, and apparently with only temporary benefit. I began to fancy my patient had taken a liking to his injections, as he watched with anxiety for the time of my visits. Having also read that aquapuncture was of very great benefit in such cases, on the evening of this day I resolved to try it; instead, therefore, of injecting the usual dose of morphia solution, I injected the same quantity of water, and left the house earlier than was my custom. Next morning

I found my patient with a downcast look, believing he was worse than ever, avowing the injections were of no avail; he had not slept, and was unable to take anything to eat, as was his custom after his evening dose. I had now difficulty in persuading him to allow a continuance of the treatment, but after an explanation, and an increased dose of morphia, I calmed his anxiety. I now determined, as he had a tolerance for morphia, to inject him twice daily with half-grain doses of morphia till he was better. I did this till the 15th of November, when I reduced the dose a little, and gradually got to one injection daily, when by the 19th of December he ceased to be under treatment. After a few weeks' care he could walk better than he had done for the last three years.

He is now (June 16th, 1877) in good health, and quite free from pain in his leg, but wears an elastic stocking for support.

This was a chronic case of sciatica, the patient having suffered more or less for the last two years. No rheumatic taint, obstruction, or pressure on the nerve could be made out. Medical treatment, or rather medicines internally, were of no avail. I put down the cause to chronic alcoholism; though the patient was not drunken, he consumed a large quantity daily of spirits. The tolerance of morphia confirmed this. During the time he was in bed elimination would also take place. He had also been much exposed to wet, which would of course aggravate matters.

The points worthy of special notice are (1) the tolerance of morphia; (2) the continuance for so long a time before beneficial effects appeared; (3) the inutility of aquapuncture, which almost lost me my patient; (4) the non-return of the disease after the discontinuance of the injections.

Yours obediently,

Wigan, June, 1877. WM. BERRY, M.R.C.S., &c.

BIRMINGHAM.

(From our own Correspondent.)

DR. HILL'S report on the health of Birmingham has just been issued, and it is, as usual, a very complete and well-arranged document. We learn from it that the birth-rate is 42·53 per 1000, and is 4 per 1000 higher than the average of the last ten years, and is also higher than that of any of the large English towns. The death-rate was 22·40. The infant mortality still remains higher than in any of the large towns, although it is slightly lower than in previous years. The deaths from zymotic disease amounted to 1336, or 3·59 per 1000, against a rate of 5·86 in 1875, and 7·35 in 1874. Half of the zymotic deaths were due to diarrhœa, and the next most fatal disease was scarlatina. There were only 147 deaths from fever, a lower number than has yet been recorded. No death occurred from variola during the year. Only forty-nine cases, and those chiefly of scarlatina, were received into the Borough Hospital, as against 420 in 1875.

Great changes are about to be made in the constitution of the medical and surgical staff of the General Hospital, and in the mode of election of the honorary officers. The governors will, on the 20th inst., be advised to sanction the appointment of two assistant-physicians and two assistant-surgeons, exclusively for the care of out-patients, each of whom will receive an honorarium of £100 per annum; and also of special officers for the obstetric, ophthalmic, and dental departments, which it is proposed to create. The dental surgeon will receive £100 per annum, but the obstetric and ophthalmic appointments will be honorary. The present costly and cumbersome mode of electing the honorary officers by polling the whole body of governors is to be done away with, and future appointments will be made by a large election committee, chosen by lot. These reforms will no doubt add much to the popularity and usefulness of this, the oldest of the Birmingham hospitals. The Birmingham Corporation having succeeded in borrowing from the Treasury, at 3½ per cent., the money for the required Improvement Scheme, will at once commence to put the scheme in operation. Similar works will also be forthwith commenced in both Walsall and Wolverhampton, the Committee of the House of Lords having confirmed the order of the Local Government Board for the projected improvements under the provisions of the Artisans' Dwellings Act.

Another prosecution of a chemist by the Apothecaries' Society for wrongfully acting as an apothecary was recently before the judge of the Birmingham County Court. Mr. Motteram, Q.C., said a chemist's duties were to buy, compound, dispense, and vend drugs. The Act was a very sensible one, and ought not to be infringed. He was prepared to give judgment that moment, but as there was an appeal in a similar case pending in a higher court, he would defer judgment until after the decision had been given on the appeal, and so save the defendant the expense of taking his case before a higher tribunal.

Mr. S. Berry, F.R.C.S., delivered the first of the "Ingleby Lectures," at Queen's College, and in so doing gave an interesting sketch of the life of the late Dr. Ingleby, who was the first Professor of Midwifery in Queen's College, and who left £2000 for the College for promoting the advancement of obstetric medicine and surgery, including the diseases of women and children.

A large meeting was held last week at the Town Hall, for the purpose of inaugurating the system of Provident Dispensaries, which has been found to work so well in the suburbs of the metropolis, and in many of the large towns, as Manchester and Coventry. Mr. R. W. Dale, M.A., moved a resolution to the effect that provident dispensaries were calculated to confer great benefit on the industrial population, and Mr. Oliver Pemberton, in supporting it, urged that the movement would greatly relieve the hospitals, by taking from them the ordinary cases of sickness, and the minor accidents, which they now had to relieve in such large numbers, and would leave more room for the severe accidents and the acute medical cases. He believed there would be a complete willingness on the part of the medical profession to help this movement. This resolution was carried, as was also another resolution as to the desirability of securing the co-operation of all the medical charities and friendly societies of the district. A large committee was appointed to carry out the resolutions, and they have already begun their labours. By some it is thought desirable to affiliate the new institution with the Birmingham Dispensary, especially if a large sum of money, left by the late Mr. Sands Cox for the purpose of founding branch dispensaries in the town, can be obtained to assist the movement.

Birmingham, July 17th, 1877.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF COMMONS.

Thursday, July 12th.

ARMY MEDICAL OFFICERS.

Mr. HARDY stated, in reply to Dr. Ward, that he could not offer the same terms of retirement to all the army medical officers as had been offered to those now joining, for the reason that the different sets of officers had entered the service on wholly different conditions.

Monday, July 16th.

SMALL-POX IN THE METROPOLIS.

In answer to Dr. Lush, Mr. SCLATER-BOOTH said,—According to the latest accounts there are 621 inmates of the five metropolitan hospitals. This number, as compared with numbers ranging from 850 to 950 during April and May, must be considered comparatively satisfactory. There is also spare accommodation for 483 cases now available for the pauper and poorer classes of patients. It may be said, generally, that the increased amount of accommodation available, together with increased activity in effecting removals and greater attention to vaccination, has enabled the authorities to hold the disease in better check than was the case when the last epidemic prevailed. Some of the vestries have provided accommodation, and some vestries and boards of guardians have taken steps by house-to-house visitation to insure greater attention to the practice of vaccination. The epidemic appears to be subsiding, but is not at an end. I shall take care to have its history investigated, and the experience of the last twelve months collected and put into shape, with the view of con-

sidering whether further legislation is required. Meanwhile, as the House is aware, I have caused several clauses which I think may be useful to be inserted in the Public Health (Metropolis) Bill.

MEDICAL DEPARTMENT, INDIA.

In answer to Dr. Lush, Lord G. HAMILTON said,—The Government of India have for some time past had the whole question of the Army Medical Service in India under their consideration, but they have not communicated any conclusions. I am not, therefore, in a position to be able to state what modifications may be proposed, or the reasons for them.

Thursday, July 19th.

SECRET DRINKING.

Mr. DALRYMPLE asked the Secretary of State for the Home Department if his attention has been called to a memorial signed by 900 medical practitioners, published in a recent number of THE LANCET, setting forth the evils resulting in their opinion, especially to women, from the purchase under the guise of necessaries of spirituous liquors from licensed grocers. And, whether he will bring that memorial under the notice of the Commission about to take evidence on that subject.

Mr. Secretary CROSS.—Mr. Speaker,—My attention has not been called to this memorial except by the question of my hon. friend. I made inquiries this morning upon the matter, but did not find that any memorial has been presented to the Secretary of State upon the subject. My right hon. friend the Lord Advocate is about—I believe in the course of next week—to appoint these commissioners, and any memorial that may come either to him or to me I will take care to forward to them. (Hear, hear.)

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the examination in Anatomy and Physiology at recent meetings of the Board of Examiners:—

Edward J. Biden, George B. Wall, and William E. Sicard, Charing-cross Hospital; Arthur Price, Frederick R. Walters, W. Williams, and S. W. Sutton, St. Thomas's Hospital; Samuel J. Gabriel, Norman Rushworth, L. P. Mark, Frank Rushworth, Charles P. Hooker, H. Smith, William Outhwaite, and Alfred S. Mackrell, St. Bartholomew's Hospital; H. M. Duncan, William R. Parker, Frank Parish, L. C. Ponsford, Albert H. Rees, H. Sainsbury, Robert S. Walton, J. E. Hine, and Frederick H. Tinker, University College; James Fulton, Toronto and St. Thomas's Hospital; Henry C. Burrows, Liverpool; James H. Greensill, Middlesex Hospital; A. H. Bampton and J. Smith, Westminster Hospital; V. E. Hunter, H. T. Griffiths, John G. Webb, H. W. Shettle, and L. R. Heyland, St. George's Hospital; Lawrence Humphry and A. C. Buller, Cambridge; Robert Brookes, G. M. Mac Donald, and J. Balls, King's College; Percy Brown, London Hospital; F. S. Dennis, New York; J. J. Robins and Wm. M. Taylor, Newcastle-on-Tyne; Arthur Harrison and J. W. L. Russell, Sheffield; Gilbert Kirker, Belfast; Albert Beverley and H. N. Oglesby, Leeds; W. B. Bates, John D. Hayward, A. Manners, F. E. Ackerley, and Alfred J. Pickworth, Liverpool; B. H. Dale and William P. Dester, Bristol; H. G. Brooke, J. K. Milne, E. L. Luckman, H. A. Dixon, and William Gibbon, Manchester; O. Todd, Aberdeen; William A. C. O. Sankey, University College, Birmingham, and Glasgow; William J. Baker, St. Bartholomew's Hospital; Seton G. Hamilton and W. Dunn, St. George's Hospital; W. Benthall, Cambridge; Edward J. Freeman, Dublin; S. N. Rendall and H. W. King, Edinburgh.

Of 137 candidates examined, 58 failed to satisfy the Board, and were referred for three months' further anatomical and physiological study.

At the last meeting of the Council of the Royal College of Surgeons, Mr. John Birkett was elected President of the College, and Mr. John Simon, C.B., F.R.S., and Mr. Luther Holden, Vice-Presidents, for the ensuing year. Dr. Humphry, F.R.S., declined to be put in nomination.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine and received certificates to practise on the 12th inst.:—

Fagg, Thomas William, Alkham, near Dover.
Green, Thomas Beaufoy, Kendal.
Rawson, Ernest, Taranaki, New Zealand.
Wakefield, Thomas, Nottingham-place.
Wright, Arthur, St. Mary's-terrace.

The following gentlemen also passed the Primary Professional Examination:—

Frederick Charles Fisher and Charles Alfred Webb, St. George's Hospital; Anthony Alfred Bowlby, St. Bartholomew's Hospital.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND.—The following gentlemen obtained the licences in Medicine and Midwifery at the July examinations:—

MEDICINE.—Hen. Arthur Charlton, John Patrick Clarke, Joseph Clarke, Jas. Vincent Clinch, John Conry, O'Connell John Delahoyde, Ebenezer Donaldson, John Joseph Dingenan, Francis Charles Fisher, Samuel M'Culloch Higgins, John B. Jennings, George Kisby, George Lyndon, William Rowlands, James Foster Rugg, Walter Henry Ryan, Henry Robert Sherrard, Richard Baker Smith, John Henry Thompson, Richd. G. Tyner, Walter Henry Winter, James Harold Wilde.

MIDWIFERY.—Henry Charlton, John P. Clarke, James Vincent Clinch, John Conry, Freeman Wills Crofts, O'Connell John Delahoyde, Ebenezer Donaldson, John J. Dingenan, William Fairbank, Francis Chas. Fisher, Francis George Goodman, William Hamilton, Samuel Higgins, George Kisby, George Lyndon, Malachi O'Dwyer, J. Foster Rugg, Walter Hen. Ryan, Henry R. Sherrard, Richard B. Smith, Richard Gelling Tyner, James E. Thompson, John Henry Thompson, George Westby, James Harold Wylde.

AT the ceremony of presentation of prizes at the Glasgow Ophthalmic Institution this week, a flattering memorial was presented to Dr. Wolfe, by the students of the University, expressive of their appreciation of the manner in which he had conducted his course of instruction throughout the session now come to a close.

SOUTH DURHAM AND CLEVELAND MEDICAL SOCIETY.—On Thursday, the 12th July, the President of this flourishing Society, Dr. Smith, entertained between forty and fifty of the members at the Durham County Asylum, Sedgefield, of which he is medical superintendent. After visiting the wards or amusing themselves in the garden with lawn tennis, &c., they proceeded to an excellent luncheon. The fine weather added considerably to the enjoyment of those present.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—This Society has just terminated a very successful session, and held its fifteenth annual meeting. The membership now includes a large majority of Bradford practitioners, and many of those from the populous districts surrounding the town. During the past session the committee concluded an arrangement with the Board of the Bradford Infirmary, by which the Society finds a permanent home within the walls of that institution, obtains the use of a large and increasingly useful medical library, and secures facilities for the prosecution of pathology, and the formation of a museum. The Society has to deplore the loss of its president for the year, J. D. Lawrie, M.R.C.S., &c., who died suddenly on the 1st January, 1877. The officers elected for the ensuing year are as follows:—President: R. H. Meade. Treasurer: W. Whalley. Secretary: D. Goyder. Curators: A. Rabagliati, M.D., and T. C. Denby. Auditors: J. Foster and J. H. Bell, M.D. Committee: W. Burnie, M.D., P. E. Miall, J. Arthur, and E. T. Tibbits, M.D.

Medical Appointments.

BARNES, Dr. F., has been elected Physician to the British Lying-in Hospital.

BATTERBURY, G. H., M.B., M.R.C.S.E., has been appointed Medical Officer of Health for the No. 1 Sub-district of the Wimborne and Cranborne Rural Sanitary District, vice Druitt, resigned.

BLACKFORD, J. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Cannock Urban Sanitary District.

BUCK, J. S., has been appointed Obstetric Assistant to University College Hospital, vice Bond, whose time has expired.

CANT, W. E., F.R.C.S.E., L.R.C.P.L., has been appointed Medical Tutor at the Bristol Medical School.

CANTLIE, Dr. J., has been appointed Examiner in Botany and Natural History at the University of Aberdeen, vice Trail, appointed Professor of Botany.

COOPER, G. C., L.F.P.S.G., has been appointed Medical Officer to the Cannock and Rugeley Colliery, vice Suffield, deceased.

CRAWFORD, W., M.B., C.M., has been appointed Medical Officer for the Witton District of the Blackburn Union.

DORAN, A. H. G., F.R.C.S., has been appointed Pathological Assistant to the Museum of the Royal College of Surgeons, vice Goodhart, resigned.

DRING, W. E., L.R.C.P., M.R.C.S., L.S.A.L. & L.M., has been appointed Surgeon to, Public Vaccinator, and Medical Officer of Health of, the Third Division of Faversham Union, vice Francis, resigned.

DYER, S. S., M.D., L.R.C.P.L., has been reappointed Medical Officer of Health for the Ringwood Rural Sanitary District for one year.

ELMSLIE, W. W., L.F.P.S., L.S.A., &c. (late Surgeon in the Imperial Ottoman Army), has been appointed Surgeon in the service of the Peninsular and Oriental Steam Navigation Company.

FAIRLEY, T., F.C.S., has been appointed Public Analyst for Wakefield for one year: 12s. 6d. per analysis, and 21s. when required to give evidence in support of an information.

GARSTANG, E. M., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Harwood District of the Bolton Union, vice T. L. Garstang, M.R.C.S.E., deceased.

HALL, F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 12 District of the Lincoln Union, vice Sealy, resigned.

HILL, A. B., M.D., has been appointed Public Analyst for Stratford-on-Avon.

MASON, G., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Wisbech Urban Sanitary District, at £40 for one year.

MERCIER, C., M.R.C.S., L.S.A., has been appointed Medical Superintendent of the Bethel Hospital for the Insane, Norwich.

MILNE, I. K., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Shipdham District of the Mitford and Launditch Union, Norfolk, vice Clouting, deceased.

PAYON, H. E., M.R.C.S.E., L.S.A.L., has been appointed Junior House-Surgeon to the Cheltenham General Hospital and Dispensary, vice Greenwood, resigned.

READ, L., L.D.S., has been appointed Dental House-Surgeon to the Dental Hospital of London, vice Merson, resigned.

SHANE, F., L.R.C.P.I., M.R.C.S.E., has been appointed House-Surgeon to the Seamen's Hospital, Greenwich, vice Makins, resigned.

SINCLAIR, W. J., M.D., has been appointed Examiner in Midwifery and Medical Jurisprudence at the University of Aberdeen, vice Keith, resigned.

STOCKEN, J., L.D.S. R.C.S., has been appointed Assistant Dental Surgeon to the National Dental Hospital, vice Hockley, resigned.

STORY, J. B., M.B., C.M., has been appointed Assistant- and House-Surgeon to St. Mark's Ophthalmic Hospital, Dublin.

WILLEY, J. M., M.R.C.S.E., has been appointed House-Surgeon and Secretary to the Royal Isle of Wight Infirmary, Ryde, vice Newman, resigned.

WOODS, T., L.R.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the No. 3 or Gillingham District of the Shaftesbury Union, vice Miles, resigned.

Births, Marriages, and Deaths.

BIRTHS.

DAVY.—On the 10th inst., at Guernsey, the wife of Francis Arthur Davy, M.D., Surgeon, Army, of a son.

DAWSON.—On the 12th inst., at Brighton, the wife of Richard Dawson, M.B., of a daughter.

MOORE.—On the 7th inst., at Pembroke Dockyard, the wife of George Moore, M.D., Fleet Surgeon, of a daughter.

OWEN.—On the 15th inst., the wife of William Owen, M.R.C.S.E., of a daughter.

SHEARMAN.—On the 17th inst., at The Hollies, Swinton, near Manchester, the wife of W. M. Shearman, Esq., M.R.C.S.E., of a son.

WILSON.—On the 13th inst., at Grey-place, Greenock, the wife of William A. Wilson, M.D., of a son.

MARRIAGES.

HEWSON—RICHARDSON.—On the 11th inst., at Marylebone Church, by the Rev. R. Kitching, M.A., Vicar of Westow, Yorkshire, R. W. Hewson, L.R.C.P.Ed., only son of J. Dale Hewson, M.D., of Coton-hill, Stafford, to Anna Maria, widow of the late H. Dallin Richardson, Esq., Solicitor, York, and daughter of the Rev. Charles Watson, Vicar of Rufforth.

ROBERTS—LINDFIELD.—On the 7th inst., at Christ Church, Albany-street, Regent's-park, Henry W. Roberts, M.R.C.S.E., L.S.A.L., of Hopetoun Villa, Wickham-terrace, Lewisham High-road, to Eliza, daughter of the late Thomas Lindfield, Esq.

DEATHS.

BELL.—On the 10th inst., at Norwich, John Crawford Bell, L.S.A.L., aged 78.

BETTS.—On the 20th ult., at Calderwood, near Kingston, Canada, Henry Augustus Betts, F.R.C.S.E., formerly of Stourbridge, aged 68.

BOULTON.—On the 12th inst., at Beverley, Robert George Boulton, M.D., aged 72.

GROWSE.—On the 17th inst., at Bildeston, Ipswich, Robert Growse, Surgeon, in his 80th year.

MCCORMICK.—On the 13th inst., George Mark McCormick, M.D., of Usher's Island, Dublin.

MALONE.—On the 11th inst., John George Malone, M.R.C.S.E., Resident Medical Officer to the General Hospital, Queenstown, aged 56.

PERY.—On the 27th ult., at Grays, Essex, Richard Hay Pery, M.R.C.S.E., aged 55.

POPE.—On the 15th inst., Edmund Pope, Surgeon, of Brixton, in his 41st year. Friends and patients please to accept this intimation.

POWELL.—On the 10th inst., at Crawley, Sussex, Henry Powell, M.R.C.S.E., aged 68.

ROBERTSON.—On the 16th inst., at South Norwood, Richard Hopkins Robertson, L.R.C.P.Ed., Secretary to the Court of Examiners of the Society of Apothecaries, aged 69.

STUCKEY.—On the 10th May, John Stuckey, M.R.C.S.E., Colonial Surgeon, Accra, Western Africa, aged 33.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Proceedings of the Medical Society of the County of Kings. July.
Medicinal Plants. Part XXII.
Illustrations of Clinical Surgery. Part VIII.
H. H. Bigg: A Manual of Orthopraxy.
E. W. Cottle: The Hair in Health and Disease.
Ziemssen: Cyclopædia of the Practice of Medicine. Vol. XV.
P. Baylis: Gag Bits.
Dr. T. D. Bulkley on Skin Disease.

Notes, Short Comments, and Answers to Correspondents.

EXPERIMENTS IN PLEURO-PNEUMONIA.

AT the meeting of the Royal Agricultural Society on the 6th ult., Mr. Duguid presented a report on the experiments conducted at the Brown Institution on the infectious properties of the exudation liquid obtained from pleuro-pneumonic lungs. The existence of cattle plague has interfered with the complete carrying out of the experiments—that is, so far as concerns the attempt to prove the communicability or otherwise of the disease by direct contact with affected animals. The results of inoculation with the matter of diseased lungs, however, have been entirely negative. The whole of the animals submitted to the process have escaped infection, and with one exception they all remained in good health. The exceptional case was that of a cow which died on the twenty-fourth day after inoculation, the cause of death, however, not being pleuro-pneumonia.

Dr. Barnard, (Gulgong.)—Our correspondent is thanked for the particulars.

ON INDUCTION COILS.

To the Editor of THE LANCET.

SIR,—In reply to Mr. de Watteville's criticism of my paper on Induction Coils, permit me to state that my endeavour was to give an idea, sufficient for the occasion, of the theory of induced currents in as few and simple words as possible. The explanation may possibly have been "superficial"; but I purposely avoided the error, into which Mr. de Watteville must pardon me for thinking he has fallen, of unnecessary abstruseness, my object being to make the principles of the subject intelligible to the many. When a technical subject is couched in ultra-technical language, it can only be comprehended by those who have already mastered its technicalities. For the reason already given I preferred to retain the terms "intensity" and "quantity" (the latter of which, by the way, Mr. de Watteville himself uses), not as definitions, but as words which have long been in use, and which I hoped would enable me to convey my meaning to those who have not made electricity a special study, and who consequently would not care to follow a more strictly scientifically worded exposition. Mr. de Watteville writes: "It is difficult to see how [the quantity of the extra current can be augmented] by the method described by Mr. Mann"; the words in brackets being a supposed quotation from my paper. I have, however, looked carefully through the paper without being able to meet with the obnoxious sentence, and therefore, like Mr. de Watteville, am at a loss to know how the difficulty is to be solved. Mr. de Watteville boldly states that "the make current has neither polarising nor electrolytical virtues." I must join issue with him here; for the make current will both deflect a galvanometer and decompose iodide of potassium, as may be proved experimentally; therefore his deduction on this head, as to the inefficiency of the unipolar arrangement, is necessarily unsound.

My reasons for preferring the uni-direction induced current are founded on physical experiments, and they have been sustained by clinical observation—facts for which Mr. de Watteville apparently does not give me the credit of having proved. I trust he will do me the justice of supposing that before I make a decided statement in an influential journal I have at least *some* grounds for my views.

Mr. de Watteville's admission as to the advantage of the unipolar current in physiological research, and his unqualified denial of its utility in therapeutics, lack congruity. If "the make current has neither polarising nor electrolytic virtues," why is it often necessary to exclude it in physiological research? Nay, further, how is its existence to be proved in the absence of physical manifestations?

Yours truly,

Manchester, July 14th, 1877. J. DIXON MANN.

Mr. W. Massey.—We do not remember any expression of opinion on vaccination by Sir William Fergusson. It was not a subject in which he was specially concerned; but we take it for granted that he highly approved of the operation.

THE INCOME TAX.

To the Editor of THE LANCET.

SIR,—I beg to inform your correspondent, "Schedule E," in answer to his inquiries contained in your last issue, respecting the deductions he is entitled to make under the head of "Expenses."

A Surveyor of Taxes, in his "Popular Guide," has laid down the broad principle, "That whatever expense is absolutely necessary and is actually incurred in the prosecution of the business or transaction by which profits are to be gained, is an admissible deduction in ascertaining the profits. On the other hand, no amount spent from the gross produce of a business for personal or household expenses, for extension of business or premises, or any purpose whatever other than the actual carrying on of such business, can be admissible as a deduction. The expenses of travelling in the performance of the duties of any office chargeable under Schedule E, or of keeping and maintaining a horse for the purpose of performing the same, and money laid out wholly, exclusively, and necessarily in the performance of the duties of the office, are deductions from the gross amount of salary, fees, &c. Also abatements for life assurance premiums, two-thirds of the rent of the premises (surgery), a proportion of the parochial rates charged on same, any sums paid as salaries to those actually employed and necessary to carry on the duties of the surgery; also sums paid for the supply and repair of the necessary utensils and implements required, and for drugs, medicines, stationery, carriage of same, and all other petty expenses incurred in the carrying on of the profession."

It will, therefore, be apparent to "Schedule E" that he will be required to state fully the amount of emolument he derives from his "union appointment," together with all fees and other incomings from whatever source derived, against the sum total of which incomes he will be entitled to deduct the whole or part (as the case may be) of the foregoing charges and expenses.

Yours truly,

July 16th, 1877. MORDAUNT.

TEMPERANCE PUBLIC-HOUSES.

THE establishment of Temperance Taverns is a step in the right direction. The "Royal Standard" in Bell-street, Edgware-road, has externally all the appearance of a flourishing gin-palace. Within, however, the bar is occupied by three large urns, which afford a constant supply of tea, coffee, and cocoa; and fruits, syrups, gingerbeer, and lemonade take the place of rum, shrub, old tom, and other fiery cordials. There are comfortable benches, marble tables, a good ham, and other eatables, newspapers, games, and a smoking room, and one can get a pint of good coffee for 2d. We hope the Royal Standard will have a profitable career.

S. X.—The Medical Act does not provide for the prosecution of quacks who practise without assuming medical titles.

Dr. F. M. Dayton.—We have no knowledge of the matter.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—You and, no doubt, hundreds of my brother officers of the Army Medical Department will have noticed with pain and regret the wording of the Warrant published in April last, referring to honorary Queen's cadet admissions to the army. This Warrant grants ten honorary Queen's cadetships annually to the sons of officers of the army, and the privilege gained is that the young men need not go up for the competitive examination, but simply pass a qualifying examination. I do not object to this in any way; but I would point out that the boon is limited to the sons of *combatant* officers only. This is the most unjust and reactionary measure I have ever known published. It excludes the sons of all medical officers from the boon, and it does so under the odious distinction of *combatant* and *non-combatant* officers. There is no designation so utterly inapplicable to us as this. It is most unfair and unjust to group us with chaplains, commissaries, pay officials, and such officers, who really are never under fire, or in little, if any, danger in a campaign. We, on the contrary, are constantly so. We are with the fighting men in every danger and in every situation. Nay, more, in those frightful epidemics that carry off so many soldiers in India, are we not also there with them in the danger? Read Hart's Army List, and see our war services; read the list of the Victoria Cross, and see how we have done our duty. Remember, Sir, we alone of all the English army departments have served in all the Indian wars, where no other English department ever serves; yet Mr. Hardy excludes us from the boon of an opening for our sons in the service. There are hundreds of military officers, called colonels, majors, and captains, doing every kind of civil duty in India, as policemen, engineers, school examiners, magistrates—men who never see any field service; yet these men's sons will have a claim which ours can never have, because, forsooth, they, although men of peace, are called "combatants." To-day, when the medical service is very unpopular, when so much dissatisfaction exists, the War Minister has permitted the narrow prejudices of the Horse Guards' faction to influence him in publishing this most painful insult to a body of officers, as brave, as devoted to their duty, and as worthy of England's sympathy, as the best of her regiments. I hope some M.P. will inquire from Mr. Hardy the reason why this most gratuitous slur is passed on us. If he persists, may we not claim admission for our sons into our own department on equal terms—viz., no competitive, but simply a qualifying examination?

These things disgust the best army doctors. No man can stand up for a service liable to such contemptuous treatment. *Esprit de corps* is killed by such action as this, and I hope and trust Sir William Muir will be true to us all, and remonstrate in our name against a glaring injustice.

Yours &c.,

Bengal, June, 1877. I. V. R. C.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.

A SECOND letter by *Dr. Grigg*, and a statistical statement by *Mr. Charles Hawkins*, will appear next week.

Dr. J. H. Walker.—We understand that this matter has been arranged in a liberal way.

POOR-LAW MEDICAL WORK.

To the Editor of THE LANCET.

SIR,—The guardians of a large workhouse, the medical work of which is discharged by two resident officers, have passed a resolution to the effect that, besides carrying out the Consolidated Order, article 207, "the medical officers be directed to visit all sick cases [which include cases of itch, venereal, and others of a chronic nature] received at the workhouse within one hour after their being removed to their respective wards." Can you or any of your readers tell me whether the guardians have power to enforce such a rule, involving, as it does, a large amount of absolutely unnecessary attendance? See Glen's Poor-law Board Orders for article 207, which ought to be read in connexion with article 154. Yours &c.,

July 11th, 1877. X. Y. Z.

M. D., (Virginia.)—Among English physicians the value of indications afforded by changes of temperature in the body is well recognised. The omission to note fluctuations of heat in a case where disease modifies the temperature is generally acknowledged to be either an oversight or loose practice.

MILITIA SURGEONS.

To the Editor of THE LANCET.

SIR,—In Mr. Hardy's answer to Dr. Playfair, he stated that militia surgeons were not intelligent enough to examine recruits. This being so, is he justified in promoting them, increasing their pay, or in leaving them in charge of their regiments during the training, where they may meet with cases of gravity? Line surgeons, as a rule, do not see recruits regularly; sometimes for years they miss them altogether. Of four I am acquainted with, only two see recruits; while I have for twenty-three years examined 300 every year. Experience, however, goes for nothing when a man is determined to break through all rule of right. Truth and justice are nothing to him.

Yours &c.,

July, 1877. A MILITIAMAN.

H. S. G.—The construction of the closets will make no difference, as the ventilating pipe is fixed below the trap. The diameter of the ventilating pipe should be three inches, and carried well away from windows. A carbon filter is unnecessary. A good plan, where practicable, is to continue the soil pipe upwards to the roof.

Dr. Pearse.—The pamphlet arrived safely, and will receive attention in due course.

REMOVAL OF INFECTIOUS CASES TO HOSPITAL.

To the Editor of THE LANCET.

SIR,—I enclose a copy of my report read to the Openshaw Local Board on July 2nd, and shall feel obliged for any remarks you can make upon it.

Yours truly,

F. ILDERTON, M.R.C.S., M.R.C.P., &c.,
Medical Officer of Health to the Openshaw Local Board.

Fairfield, near Manchester, July 4th, 1877.

Fairfield, near Manchester, July 2nd, 1877.

MR. CHAIRMAN AND GENTLEMEN,—In presenting my report for the past month of June, I am glad to be able to say the death-rate is small, being 20, or 19·6 per 1000 per annum, and for the corresponding month last year, 21, or 19·3 per 1000 per annum; and, to show the high rate of infantile mortality, 9 of these were young children under five years of age. Three deaths from zymotic diseases were registered—one from measles, one from typhoid fever, and one from scarlet fever.

We have had six cases of small-pox in the township during the past month—viz., one at 372, Ashton-road, where there was also a case last month; three at 17, Wharf-street, next door to the house at which there was a case last month; one at 35, Pottery-lane, at the house of a woman who nurses small-pox cases; one in South-street; and one in Grey-street. They were all removed to the hospital, and the houses when necessary were disinfected. I believe all the patients are doing well. It is my opinion that most of these cases arose from one source. The number of births was 45.

I wish to ask the Board whether it is necessary for the union medical officer to see a case of small-pox or any other infectious disease which we wish to remove to the hospital if the patient's friends are willing to pay part of the expenses incurred; for I see by THE LANCET that at a meeting of the Society of the Metropolitan Medical Officers of Health this subject was warmly discussed in the following words: "A very strong feeling prevailed to the effect that if clause 64, relating to the admission of persons other than paupers, is to operate successfully, some very decided steps must be taken to secure the depauperisation of such persons, or rather to assure them that they are not pauperised by being admitted into the Board's hospitals." I can fully bear out the foregoing remarks; for in many cases I have to see, the people have a decided objection to the visit of the parochial medical officer, inasmuch as it has the appearance of pauperising them. Could this obstacle be removed, I am persuaded that many cases of an infectious nature could be prevailed upon to go to the hospital which otherwise remain and tend to the spread of the disease.

I remain, Gentlemen, yours respectfully,

F. ILDERTON,
Medical Officer of Health.

*** The discussion referred to that occurred at a meeting of the Society of Medical Officers of Health related to a Bill that affected only the metropolis. In the cases quoted, however, it is not necessary that the Poor-law medical officer should see such patients if they are about to be removed to a hospital provided by the *sanitary authority*, and *not by the guardians*.—ED. L.

Surgeon L. P. Vines.—We agree with our correspondent's opinion that the use of corsets and garters is injurious; the former to chest development, and the latter causing varicose veins and other local evils.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—We venture to hope that you will kindly allow us through your columns to call the attention of the profession to the case of Dr. de Lisle Allen, who, after an illness of more than two years, is now an inmate of Bethlehem. During the whole of this illness Dr. Allen has been incapacitated from following his profession, and his family have been indebted to the kindness of private friends, supplemented by a grant from the Medical Benevolent Fund, for the means of defraying the heavy expenses necessitated by the nature of his malady. This appeal is now made to enable his wife and daughter to keep a home, and to put them in a position of earning a livelihood for themselves. Dr. B. W. Richardson, 13, Hinde-street, Manchester-square, has kindly consented to act as treasurer.

Signed,
MR. ERICHSEN, F.R.C.S.
MR. THOMAS SMITH, F.R.C.S.
BENJAMIN W. RICHARDSON, M.D., F.R.S.
July, 1877. J. HUGHLINGS JACKSON, M.D.

Chorea.—The certificate of a medical attendant relates to the "cause of death," not the *fact*. To establish the decease of an individual legally, a copy of the register of death is the document required.

Mr. J. Andrew should communicate with Colonel Loyd Lindsay, who is the chief promoter of the Red Cross Society.

THE LIMES OF THE BAHAMAS.

To the Editor of THE LANCET.

SIR,—With reference to your annotation headed "Lime-juice *versus* Lemon-juice," in your last issue, will you allow me to call the attention of your readers to the utterly neglected state of much of the fruit supply of the Bahamas. In the papers relating to H.M. colonial possessions, Governor Robinson, when forwarding his Report upon Blue-book for 1875, observes: "Tons of limes are allowed to rot year by year under the trees in the colony, simply because the people have not learnt how to put up the juice for market for exportation. Your obedient servant,

J. T. W. BACOT,
July, 1877. Deputy Inspector-General of Hospitals.

Mr. S. Walker.—We appreciate very highly the kind considerations which make our correspondent reluctant to protest against the practice referred to. Still it seems to us that a representation should be made to the party in question as to the highly objectionable nature of his position. It should be made in a kindly spirit, and by the whole profession of the neighbourhood.

Dr. Prideaux's paper shall be published in an early number.

"PENZANCE AS A HEALTH-RESORT."

To the Editor of THE LANCET.

SIR,—I beg most respectfully to be allowed to contradict an error or two in an article on "Penzance as a Health-resort" in your issue of the 14th inst., which says, "We believe that there is no registration of the lodging-houses with regard to the presence of infectious cases therein. Nor is there a separate hospital for the isolation of such cases should they occur." Such is not the case, as the lodging-houses are registered under the Common Lodging Houses Acts of 1851 and 1853, and there is a separate hospital for the isolation of infectious cases.

As to sewer ventilation, there are a large number of ventilating shafts fixed on the mains, and the surveyor is getting others fixed. There are also several small tubes fixed on the upper bends of closet-traps and soil-pipes, which are carried beyond the uppermost windows.

I am, Sir, yours obediently,
N. C. WHEAR,
Inspector of Nuisances, Penzance.

Sanitary Inspector's Office, Penzance, July 16th, 1877.

*** Our remarks did not refer to the common lodging-houses, which are, of course, registered; but there is no system of registration by which anyone taking apartments in the town can learn whether a case of scarlet fever or measles has been in the same rooms just previously. We are glad to learn that the surveyor sees the need of additional sewer ventilators, and hope that he will not be too sparing of them.—ED. L.

X. Y. Z.—The late Mr. Griffin's work on Urine Analysis gives full information. Messrs. Griffin and Sons, of Garrick-street, supply it and all necessary apparatus. We can hardly say which is the best cheap microscope. There is little to choose among those of good makers.

UNQUALIFIED MIDWIFERY PRACTICE.

To the Editor of THE LANCET.

SIR,—The following case may be deemed worthy of record in your journal.

About seven o'clock one evening I was sent for to attend a midwifery case in a colliery village not far from my residence. On arriving I found an unqualified practitioner present, who informed me that the patient had been in labour since 10 A.M. that morning; but, as the pains were so weak and ineffective, he had not stayed the whole time with her; also that the presentation was natural, and that, as inertia was the sole cause of delay, he had twice given ergot. On examination I found the umbilical cord in the vagina, and a shoulder firmly pressing down and fully occupying the upper outlet. The patient's strength having been much exhausted, I immediately administered chloroform to relax the ergotised uterus. I now, having pressed the shoulder out of the way, introduced my hand into the uterus to turn, and there found the unruptured membranes of a second child with the head presenting. As this prevented my getting to the feet of the first, I ruptured the membranes, seized the head of the second child, and brought it well into the outlet, where I retained it until a contraction of the uterus made it safe. I then delivered with the long forceps. The next step was to turn the first presenting child, which was done with ease, the uterus being quite relaxed. The chloroform was now suspended, and, the patient recovering consciousness, a full dose of ergot in brandy was administered. The next contraction of the uterus sent the child into the bed, which was quickly followed by the placenta; the uterus contracted well, and I am glad to say the patient made a rapid recovery. Both children were dead.

Yours truly,
Chester-le-Street, July 11th, 1877. W. BENNETT, L.R.C.P. Ed.

W. C. M.—We presume the Midwifery licence of the Royal College of Surgeons of England takes as high rank as any special qualification of the same class.

A HINT TO VACCINATORS.

To the Editor of THE LANCET.

SIR,—A gentleman having been vaccinated unsuccessfully by two different practitioners, came to me as he was anxious to be thoroughly protected from small-pox. I raised blisters the size of a fourpenny piece with liquor epispasticus, and, after puncturing and letting out the serum, I blew into each the contents of a vaccine tube. The result was perfectly satisfactory, good and characteristic marks being left. This method was suggested to me some time ago by Dr. Pritchard, of Tenham, who thinks that it can hardly ever fail; but as it is not generally known, perhaps the report of this case may be useful.

Your obedient servant,
Twickenham, July 10th, 1877. ALBERT BENTHALL, L.R.C.P. Ed., &c.

W. A. F.—Our correspondent is house-surgeon of an infirmary, and states that it is the practice to hold inquests on patients who have died in the institution without the jury seeing the body or taking medical evidence. The first omission alone renders every inquest so held distinctly illegal, and "W. A. F." is bound as a good citizen to report the facts to the Home Secretary.

TAPEWORM.

To the Editor of THE LANCET.

SIR,—In the number of your excellent journal for June 23rd I was astonished to find mention of an article on Tapeworm by Professor Mosler. Allow me to direct your attention to the fact that this article appeared originally in my *Deutsche Medicinische Wochenschrift*, 1876, No. 47, of which you will be pleased to take notice in the copy enclosed herewith. You will kindly excuse me if I insist on the priority in this case, and I should be very thankful if you would be good enough to mention my statement in your paper.

Yours faithfully,
Berlin, July 8th, 1877. P. BOERNER.

Veritas.—Courtesy would prompt a principal to hand over the half-fee received from a neighbouring practitioner to his assistant, if the latter had attended the case; but in strict law, we presume, the assistant having attended for his employer and at his request, the service rendered would form part of the duty done for a salary received. The time occupied, we assume, belongs to the principal by contract.

Bookkeeping.—We believe both systems to be good, but cannot say whether one is superior to the other.

PROFESSIONAL ETIQUETTE.

To the Editor of THE LANCET.

SIR,—May I ask you kindly to afford me space to reply very briefly to Mr. Sealy's letter in your impression of July 14th.

When I was called in on Sunday, the 17th of June, to attend Mrs. A——, I was not informed that Mr. Sealy had previously been sent for, nor had I the least reason to suppose such a thing, Mrs. A—— being my patient, I having attended her only a few weeks before in an illness. As I stated in my letter to you of June 27th, it is a fact that I was absent from the village for a few hours on Monday afternoon, the 18th June, during which time Mr. Sealy was called in, and prescribed a bottle of medicine. On my return home I found a note from the patient's house, requesting me to meet Mr. Sealy in consultation. I immediately visited Mrs. A——'s residence, and explained to her relatives that it was not customary in the profession for a medical man to meet his junior in consultation unless he were a man of superior standing; and learning from them that Mr. Sealy was again expected, I declined to go on with the case. From that day to this I have not received a line from Mr. Sealy or a call.

I do not complain of Mr. Sealy administering a sedative to the patient in my absence; but I do contend that it is a breach of professional etiquette to attend another medical man's patient without acquainting him thereof.

I refrain for the present from further defending my diagnosis of the accident until a surgeon of undoubted skill has seen the case.

Yours truly,
FREDERICK STEDMAN, M.R.C.S. Eng., &c.
Castleton, *viâ* Sheffield, July 17th, 1877.

Dr. T. R. Glynn.—The communication was received, and shall be inserted at as early a date as possible.

Mr. H. C. Mayer.—It does not appear that the writer offers any suggestions as to the subject in question.

THE CASE OF SUPPOSED MERCURIAL POISONING.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent's request, I have much pleasure in stating the facts of the case of supposed mercurial poisoning.

A child, aged seven weeks, was brought to the out-patient department on the day previous to its death, suffering from symptoms of congenital syphilis, and was ordered one-grain doses of mercury with chalk. I did not see the child during life; but the following is the mother's account:—Through her inability to read the instructions as to the administration of the powders, she immediately upon her return home gave the child six doses. In an hour severe vomiting set in, which continued for about six hours, with no other symptoms except that the child cried a great deal. The vomiting then ceased; but the child gradually became "very low," and in eighteen hours subsequent to the administration of the mercury was brought to the hospital, and when seen found to be dead.

The post-mortem examination, conducted by Dr. Sutton nine hours after death, revealed no morbid changes in the various organs sufficient to account for death, which was, as indicated by the firm contraction of the left ventricle, brought about by collapse.

Dr. Sutton was of opinion that, considering the absence of morbid changes, the mercury had probably acted as an irritant, set up the vomiting, which induced collapse and death.

Yours truly,
VALENTINE REES,
London Hospital, July 13th, 1877. House-Physician.

A LARGE LOOSE CARTILAGE.

To the Editor of THE LANCET.

SIR,—I send you particulars of the following case, thinking it may be interesting to some of your readers.

J. P——, aged thirty-two, a labourer, lately applied to me, complaining of rheumatism in the knee-joint. Upon examination I found a very large loose cartilage, which was freely movable. He said he had noticed it for many years past, and that it had been gradually increasing in size. It originated, he said, from a blow he received some years before. Finding I could get it some distance up into the external pouch of the synovial membrane, I recommended that it should be fixed there with pins. This I did, and allowed the pins to remain a week. On their removal, the cartilage was apparently quite firm; but upon the first movement it again slipped into the joint. I then recommended its removal. This he consented to, and when under the influence of chloroform I pushed it as high as possible into the pouch, cut down upon its upper extremity, under the carbolic spray, and removed it with great ease. I dressed the wound antiseptically. The whole of the deeper portion and seven-eighths of the skin healed by first intention; the remainder gave us no trouble. A week after the operation the man walked down to my house with perfect comfort. The cartilage measured an inch and a half by an inch and a quarter, and weighed nearly two drachms.

Your obedient servant,
Hornsey-road, N., July 5th, 1877. S. M. CAFFYN.

MORTALITY FROM DISEASES OF THE RESPIRATORY ORGANS.

To the Editor of THE LANCET.

SIR,—In this town of 27,000 population I am medical officer of health. During the past month, out of a total of 44 deaths, there were 23 from diseases of the respiratory organs. I shall be much obliged by any medical officer of a town having a corresponding population informing me of a death-rate from diseases of the chest approaching this. The general average here of deaths from diseases of the respiratory organs has been one-third of the total.

Yours &c.,
Maidstone, July 11th, 1877. FRED. BARHAM.

ABSTINENCE FROM ALCOHOL.

To the Editor of THE LANCET.

SIR,—The letter of your correspondent, "T. C. A.," on the above subject is most interesting, because the observations are those of a man evidently free from prejudice on the one side or the other of the great alcohol question. I am thoroughly convinced that his interpretation of the cause of the symptoms specified, and which mean languid digestion, mal-assimilation, and consequent defective nutrition, is the true one—viz., the necessity for a small quantity of alcohol as part of the daily diet to the vast majority of brain-workers. We cannot afford to discard that which has been for over 4000 years associated with the highest forms of civilisation. I myself tried the experiment of total abstinence for six months, but was obliged to come back to my "wee drap," having suffered from symptoms similar to, but more exaggerated than, those described by your correspondent.

If we, under ordinary circumstances, adhere to the rule laid down by Dr. Parkes, and make an ounce and a half of absolute alcohol our daily *limit*, we shall, I feel assured, do so with safety and benefit.

Yours faithfully,

THE AUTHOR OF "TEMPERANCE *versus* TEETOTALISM."

Basingstoke, July 18th, 1877.

To the Editor of THE LANCET.

SIR,—May I venture to suggest to your correspondent, "T. C. A." (THE LANCET, July 14th), a remedy for the ill-effects produced in him by abstinence from alcohol. I am in the habit of drinking considerable quantities of coffee during the evening, and I have found it improve my capacity for reading late into the night, and also to exert a slightly aperient effect upon me.

I am, Sir, yours &c.,

London, July 18th, 1877. R. W.

HAY FEVER.

To the Editor of THE LANCET.

SIR,—At the present season it may be of service to sufferers from hay fever to know that an ointment of one grain of morphia, ten grains of quinine, and three drachms of spermaceti ointment, when smeared on the outside of the nostrils in small quantities, relieves the irritation.

I am, Sir, yours &c.,

Montgomery, July 15th, 1877. M. F. H.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. G. Johnson, London; Mr. C. Hawkins, London; Dr. Farquharson, London; Dr. Will, Aberdeen; Sir E. H. Currie, London; Mr. Massey, Ottery St. Mary; Mr. Walker, Middlesborough; Mr. Alexander, Liverpool; Dr. Glynn, Liverpool; Mr. Frost, Hartshill; Dr. Ratton, Madras; Dr. Longhurst, London; Mr. W. F. Humphreys, Montgomery; Mr. Dring, Broughton; Bishop Ryan; Mr. Fernes, Macclesfield; Mr. Ewens, Cotham Brow; Dr. Thompson, Kensington; Dr. Walker, Boulogne; Mr. Ingpen, London; Mr. Mayer, London; Mr. Sealey, London; Mr. Mann, Manchester; Dr. W. R. Williams, London; Mr. Doran, London; Dr. W. B. Carpenter, London; Mr. Emson, Dorchester; Mr. Buck, London; Mr. Pearse, Plymouth; Mr. Bacot, Axminster; Mr. Bickerstaffe, Darlington; Mr. Jack, Glasgow; Mr. Phillips, London; Mr. Banks, Liverpool; Dr. P. Boulton, London; Mr. Hay, Wolverhampton; Mr. Jones, Liverpool; Mr. Walker, Glasgow; Mr. Andrew, Queensbury; Mr. Rees, London; Dr. Spalding, Portland, U.S.A.; Mr. Pemberton, Birmingham; Mr. Brett, Bridlington; Mr. James, Bournemouth; Dr. Polovski, Varna; Mr. Chater, Woolwich; Mr. Moxon; Mr. Walker, Aylesbury; Dr. Monckton; Dr. Church, Edinburgh; Mr. Tinnell; Dr. Grigg; Mr. Matthews, Longsight; Mr. Wheat, Penzance; Mr. Letty, Yeovil; Dr. Gowan, Rotherham; Dr. Jones, Manchester; Dr. Redwood, Rhymney; Dr. Morris; Mr. Wade; Mr. Ramsay; Mr. Lee; Mr. Martin; Mr. Green; Dr. Barnard, Gulgong; Dr. Wallace, Elmslie; Mr. Stedman, Castleton; Dr. Eberle; Dr. Macpherson, Liverpool; Mr. Hartness, Whitehaven; Mr. Goyder; Dr. Dayton, Brandenburgh; Dr. M'Lintock, Church Stretton; Mr. Newman; Dr. Verdier, Cauvalat; Dr. Neaves, Dundee; Dr. Lefevre, Dieppe; Dr. Prideaux; J. Grunhausen, Berlin; Mr. Fuller; Observer; I. V. R. C.; Veritas; S. X.; Mordaunt; W. A. F.; A Non-medical Inquirer; F. W.; Vice; The Registrar-General of Births and Deaths; J. D.; Beta, India; M.D., Virginia, Nevada; A Junior Licentiate of R.C.P. & S. Edin.; Student; A. B.; The Registrar-General of Edinburgh; Alpha, Durham; J., Liverpool; F. G. H.; The Author of "Temperance *versus* Teetotalism"; R. T.; A Militiaman; R. W.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Davies, Llanbyther; Mr. Worsley, Ryde; Messrs. Jolly and Sons, Norwich; Messrs. A. and C. Black, Edinburgh; Mr. Hartley, Cheltenham; Mr. Lyon, Houghton-le-Spring; Mr. L. Tait, Birmingham; Dr. Hentsch, Bromley; Mr. Dearden; Mr. Wotherspoon, Paisley; Mr. Wheeler, Manchester; Mr. Ormiston, Neath; Mr. Briscoe; Dr. Roberts, Hastings; Dr. Lee, Heckmondwike; Dr. Thursfield, Bridgnorth; Mr. Gell, Birmingham; Mr. Hoare; Dr. Gairdner, Glasgow; Dr. Shearman, Swinton; Dr. Davies, Ebbw Vale; Mr. Sheppard; Dr. Bankier; Mr. Ottaway; Dr. Burder, Bristol; Mr. Cross; Mr. Bate; Mr. Drew, Stow; A., Bradford; Medicus, Axminster; Medicus, Stockton-on-Tees; D. J.; A. B., Peterborough; Medicus, Chorley; T. T., Margate; S. G. H., Ryde; Medicatis; A. S., Tipton; M.R.C.S., Great Grimsby; C. C.; M.R.C.S.E.; R., Leicester; X. L., Carnarvon; Medicus, Walsall; F. C.; X. Y. Z., Oxford; B., Leeds; Physician; H. R.; Alpha, Cannock; Medicus, Trowbridge; J. F. T., Erith; Delta; Medicus, Buxton; Omega, Dover; G. P., Dublin; R. M., Medicus, Aberdeen; J. P., Ystrad; J. A. P., Edinburgh; W. P.; C. A. R., Heytesbury; Medicus, Wrexham.

Richmond and Twickenham Times, Shield, Clinic, Wednesbury Herald, Commercial World, School Guardian, Isle of Wight Observer, Otago Daily Times, and *Hornet* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, JULY 19TH, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
July 13	29·70	W.	58	65	110	77	55	...	Overcast
,, 14	29·61	S.W.	61	64	97	68	61	0·04	Cloudy
,, 15	29·23	S.W.	58	64	102	67	57	0·74	Cloudy
,, 16	29·37	S.W.	57	61	75	62	55	0·15	Overcast
,, 17	29·47	W.	57	60	75	64	55	0·44	Overcast
,, 18	29·86	W.	55	61	108	70	53	0·01	Cloudy
,, 19	29·85	S.W.	58	63	90	69	57	...	Cloudy

Medical Diary for the ensuing Week.

Monday, July 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, July 24.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, July 25.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, July 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2P.M., and on Friday at the same hour.

Friday, July 27.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 3 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Annual Meeting.

Saturday, July 28.

ROYAL FREE HOSPITAL.—Operations, 3 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

TERMS OF SUBSCRIPTION TO THE LANCET.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year ..... £1 12 6 | Six Months £0 16 3

TO THE COLONIES AND INDIA.

One Year £1 14 9

Post Office Orders in payment should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable to him at the Post Office, Charing-cross.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under ..... £0 4 6 | For half a page £2 12 3
For every additional line ... 0 0 6 | For a page 5 0 0

The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—

Mons. DE LOMINIE, 203, Rue Grenelle St. Germain, Paris.